DOCUMENT RESUME

ED 159 087 SO 011 042

AUTHOR	Dawson, George G., Ed.
TITLE	Economic Education Experiences of Enterprising Teachers, Volume 15. A Report Developed from the 1976-77 Entries in the International Paper Company Foundation Awards Program for the Teaching of Economics.
INSTITUTION	Joint Council on Economic Education, New York, N.Y.
PUB DATE	78
NOTE	128p.; Picture on page 26 and chart on page 75 may not reproduce clearly in hard copy due to poor reproducibility and small type size in original document
AVAILABLE FROM	Joint Council on Economic Education, 1212 Avenue of the Americas, New York, New York 10036 ($2.00, paper cover)
EDRS PRICE	MF-$0.83 HC-$7.35 Plus Postage.
DESCRIPTORS	Academically Gifted; Awards; Business Education; Case Studies; Class Activities; Consumer Economics; Consumer Education; Course Content; *Course Descriptions; Curriculum Development; *Economic Education; Educable Mentally Handicapped; Educational Needs; Educational Objectives; Educational Practice; Effective Teaching; Elementary Secondary Education; Fundamental Concepts; Higher Education; Instructional Innovation; *Learning Activities; Program Descriptions; Program Development; Projects; Social Studies; *Teacher Developed Materials; Teaching Methods; *Teaching Techniques

ABSTRACT

Twenty award winning, teacher-developed programs, projects, courses, and materials in economic education are presented. These case study projects are designed to be used with kindergarten through college students. The case studies are organized by grade level into five chapters. Chapter I suggests ways to teach economic concepts to educable mentally handicapped children in grades K-3 and provides curriculum materials for typical first and second grade children on scarcity, economic disadvantagement of blacks in the United States, and the role of the government in meeting consumer demands. Chapter II focuses on community issues and economic awareness for grades four through six. Chapter III offers materials on money, banking, the Federal Reserve System, small business economics, restaurant management, and the relationship between economics and values for use in grades seven to nine. A general economics program for teenage mentally handicapped students is also outlined in this chapter. Chapter IV contains descriptions of four programs for high school students. Topics are the world marketplace, values in decision making, analytical economics for intellectually gifted students, and a self-contained mini-economy. The final chapter offers four models for curriculum development on the college level. An appendix at the end of each chapter provides brief overviews of additional courses and programs in economic education. For each case study, information is presented on grade level, project background, student ability, objectives, activities, and evaluation. (Author/DB)

ED159087

ECONOMIC EDUCATION EXPERIENCES OF ENTERPRISING TEACHERS

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A Report
Developed from the 1976-77 Entries in

The International Paper Company Foundation Awards Program for the Teaching of Economics

volume
15

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FOREWORDS

After almost thirty years of involvement in economic eduction, I have decided to become "otherwise engaged" with my mind and time—withdrawing with the faith that others are equipped with the desire and ability to provide leadership for this continuing important area of education.

At the highest level among my gratifications and memories are those associated with establishing and administering the National Awards Program for Excellence in the Teaching of Economics—more commonly known for many years as the Kazanjian Awards Program and recently as the International Paper Company Foundation Awards Program.

In this Foreword for the 15th Volume of *Economic Education Experiences of Enterprising Teachers*, the annual publication of selected entries, I welcome the opportunity to offer farewell observations and appreciations.

There are two observations which I hope will be useful to answer key questions I have been asked about the Awards Program: What kind of teachers win? Why have particular states been outstanding in the Awards Program?

1. The kind of teachers who win awards for the teaching of economics are outstanding teachers in general. They have been "turned on" to the importance of teaching economics and have gained confidence they can do it through receiving pertinent knowledge of economics and methodology, and they have decided to focus on it as an effective contribution to their teaching responsibilities. After learning about and deciding to enter the Awards Program, they have been thorough and creative both in teaching and keeping evidence of their classroom experiences. Finally, they have been willing to invest time in putting together an entry which captures and transmits the skills and spirit of the teacher, the activities and rewards for the students, and the support and commendation of parents, community and colleagues.
2. The State Councils which have been most successful in having winning teachers are those which believe strongly in the worth and central aim of the Awards Program—providing a responsible means to recognize achievements in the teaching of economics and by so doing to stimulate and guide the continuing advancement of economic education. They have secured the assistance of a wide range of key people and informational outlets to acquaint teachers with the importance and benefits of the Awards Program, have encouraged and assisted teachers on a personal basis to do outstanding work, have provided guidance on the preparation of entries, and have kept in contact with individual teachers throughout the year to make certain that entries are submitted.

There have been far more people deserving my appreciation over a period of fifteen years than I can mention specifically now. However, a special acknowledgment must be made of John C. Schramm, Managing Director of the Kazanjian Foundation, with whose professional and personal support the Awards Program came into being and was nurtured to strength. The award-winning teachers have been a source of personal friendships, inspiration and cherished memories as we corresponded and joined in professional activities. The Awards Program and I have been enriched by the competence, dedication and cooperativeness of the distinguished Judges. The editors of the *Economic Education Experiences of Enterprising Teachers* have done a masterful job in providing the essence of the entries for the benefit of others. Those who have administered the Awards Program Depository have extended the usefulness of the valuable teaching projects.

Finally, I extend appreciation and a solid vote of confidence to Mrs. Sandra Kuntz, Director of Educational Programs of the International Paper Company Foundation, and to Anthony F. Suglia, JCEE Coordinator of the Awards Program, for the firm, devoted and thoughtful way they have assumed leadership of the Awards Program.

George L. Fersh

An appropriate title for this publication might well be "So Proudly We Hail" in tribute to the teachers whose projects and activities in economic education were judged to be award winners in the 15th Annual National Awards Program for the Teaching of Economics. This recognition is indeed fitting and proper, for, as the awards program has matured over time, there has been a significant increase in the level of competition.

Whatever measure was used to evaluate the Awards Program, one would conclude that it has been highly successful in accomplishing its purposes. The quality of the award-winning entries has been impressive, to the degree that the authors are asked to make presentations at workshops and in-service programs in economic education. Many award winners now serve as consultants, and a significant number have been approached by publishing companies. As a tribute to the success of the national program, many State Councils on Economic Education, at last count 23, and considerable numbers of Centers for Economic Education now conduct their own local awards program. In most cases, only those projects and activities that have achieved recognition in the state and local competitions are forwarded to the Joint Council for national consideration.

To meet its objectives, the initiators of the Awards Program envisioned that diverse means would be utilized to disseminate the winning entries throughout the nation. Principally, this has been accomplished through the annual publication of *Economic Education Experiences of Enterprising Teachers* which includes abstracts and descriptions of all award-winning entries. The publication is distributed to educators and schools throughout the nation. In addition, a National Economic Education Depository has been established at Ohio University as a resource center from which all entries submitted are available for review.

An activity of this magnitude is dependent upon the contributions of a number of outstanding people, among whom are the judges whose dedication and tireless efforts form the capstone of the project.

The Joint Council acknowledges the outstanding contributions made by Dr. George G. Dawson, who served as Editor for this publication. Dr. Dawson's seemingly boundless energies and deep interest in economic education have been instrumental in producing this booklet over the years.

Finally, and of the highest importance, the Joint Council offers its gratitude and appreciation to Mrs. Sandra Kuntz, Vice President and Director of Educational Programs of the International Paper Company Foundation, for support of the National Awards Program for the Teaching of Economics, this publication, and the various associated services offered to enrich this outstanding contribution to American education.

Anthony F. Suglia, *Director*
Affiliated Councils Program
Joint Council on Economic Education
and *Coordinator, National Awards Program*

EDITOR'S INTRODUCTION

The fifteenth year of the Awards Program brings both bad news and good news. The bad news is that Dr. George L. Fersh is retiring after having coordinated the Program for a decade and a half. George Fersh's creativity, imagination and enthusiasm were in large measure responsible for the success of this unique endeavor, and he provided the encouragement, inspiration and guidance that led many teachers to submit their projects. Furthermore, his constant support and efficient administration served as a model for others.

Great ideas emanate from the minds of brilliant men and women, but they live on and acquire a life of their own. Thus it is with the Awards Program, and thus it is that there is good news also. First, the administration of the Program is now in the able hands of Mr. Anthony F. Suglia who "learned the ropes" from George Fersh himself. Second, the idea continues to spread, as more and more states are establishing their own Awards Programs and coordinating them with the national effort. Third, the quality of the entries remains high and there is no sign that the wellsprings of creativity are drying up. Fourth, Dr. Fersh is not removing himself completely from the economic education movement, but intends to assist the Joint Council on Economic Education in various ways. So, while all of us who have ever been involved in this Program wish George Fersh well and hope that he gets some much needed and highly deserved rest and relaxation, we know that we can still call upon him for inspiration and guidance. I am sure that all who read this will join me in dedicating this fifteenth volume to George Fersh and in giving him a unanimous vote of thanks for all that he has done for us over the years.

I am indebted, also, to Tony Suglia for the smooth way in which he has been carrying on the Program after George Fersh's departure, and for his work in editing Chapters Three and Four. My thanks also to the International Paper Company Foundation for their continued support of the Program, to Dr. M. L. Frankel who has retired as President of the Joint Council, and to Dr. Michael MacDowell, the new President of the JCEE.

Those who are contemplating submitting an entry to the Awards Program, and those who have submitted entries but failed to win, might profit from a generalized description of winning projects. It must be realized that the articles published in this book are usually condensed versions of the original reports, and that some of the material teachers submit cannot be depicted or even described easily. The characteristics of a prize-winner are as follows:

1. The project shows *originality*. It is more than a rehash of someone else's work, or at least it gives an entirely new "twist" to an idea developed in a previous year. Ideas that captured awards in years past tend to become "old hat." This does not mean that they are not good, but simply that the awards must go to those who come up with newer ideas.

2. The *class situation* is clearly described in the better reports. The judges want to know what ages, ability levels, or special characteristics apply. If the students represent a particular socioeconomic or ethnic group, the judges should know this.

3. *Scope and sequence* are set forth. The reader should be told at the very beginning whether the project describes a year-long or a semester-long course, a six-week unit, a special project of three-weeks duration, a single lesson, or whatever. If it is less than a full course, the author should show how the project fits into the course being taught, and how it was related to material that preceded or followed it.

4. *Goals are listed* in specific terms. How can a reader judge a project unless he or she knows what specific understanding, facts, skills, habits, attitudes, or behavioral changes the teacher wished to impart?

5. *Motivational devices* are spelled out and *initiatory activities* are described. How did the teacher get the pupils interested in the subject to be taught? How did he or she then start the course, unit, lesson or project?

6. A step-by-step account of *teaching techniques* is given. It must be remembered that the basic purpose of the Awards Program is to help other teachers. These projects can serve others only if the author gives the details of the methods employed. It is not enough simply to say that a panel discussion was held—the reader should see exactly how the panel was set up, what preparations were made, how this activity fit into the total project, how it was evaluated, and so on. Where appropriate, sample lesson plans should be included, along with such items as assignment sheets, instruction sheets that might have been prepared for the students, and the like.

7. *Photographs* or *samples of student work* are included. Photographs of bulletin board arrangements, table displays, murals, and other items which cannot be shipped are welcome. It is not necessary to submit large posters or bulky objects if a photograph will suffice. Neither is it necessary to send in everything the students have done. One or two typical term papers, for instance, will do.

8. The *culmination* of the unit project should be explained. Good teaching units have three basic parts: (1) initiatory and motivational activities; (2) developmental activities; and (3) culminating activities. The first help to get the pupils interested in the unit, project or lesson; the second develop the ideas, concepts, skills, understandings and attitudes listed in the goals; and the third bring the experience to a close by summarizing and applying that which was taught. Plays, assembly programs, displays, field trips, the making of films or filmstrips, simulations, and many other activities can be used to culminate a unit.

9. *Evaluation techniques* should always be included in the reports. These generally include tests of all types (short-answer, essay, and performance examinations), but can also include less formal things, such as self-evaluations by individuals, groups, or the class; written or oral evaluations by outsiders; and observations of pupil behavior. Samples of testing instruments ought to be submitted with the reports, along with the results.

10. Finally, attention to the *requirements* as set forth in the Awards Program application form, an *orderly arrangement* of the material, and simple neatness are appreciated.

The educator who attempts to include each of the 10 characteristics outlined above will have a good chance of winning. It should be noted, however, that the competition is keen, and that each year it becomes more difficult to win than it was the year before. Prospective entrants would be well advised to seek the comments and criticisms of others before submitting their projects. In particular, the teacher whose formal preparation in economics is minimal should consult an economist regarding the accuracy and appropriateness of the economics contained in the report. Many projects which represent an enormous amount of time and effort, and which contain superb ideas and materials for teaching, fail to capture an award simply because they contain little or no economics or because the economic content is inaccurate.

The Editor hopes that this brief summary of what constitutes a good project will be useful to educators. He deeply appreciates the work of those teachers (nonwinners as well as winners) who are contributing so much to the elimination of economic ignorance in our society. It is hoped that more and more teachers will enter the Awards Program in the future, sharing their knowledge and experience with others for the good that this can do as well as for the possibility of financial rewards.

The Editor acknowledges with sincere thanks the cooperation of the teachers whose ideas appear in this volume. They have been most patient and understanding in permitting us to use their material and in agreeing to our many editorial revisions.

George G. Dawson, *Dean*
Empire State College

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CHAPTER ONE

Economics for the Educable Mentally Handicapped

Betty Anderson

West Side Elementary School, Midwest City, Oklahoma

Introduction

My main goal as a teacher of the educable mentally handicapped is to help them to become as economically independent as possible. Many of my students will work, and all will be consumers. Thus, economic education is important to them. All these children are a part of our society, and some will depend on society to care for them for their entire lives. To the extent that they can learn skills that will make them even partially independent economically, society will derive benefits.

I am in complete agreement with Dr. Oliver P. Kolstoe, who has written:

> The National Education Association classifies (1) economic efficiency, (2) worthy home membership, (3) worthy citizenship, and (4) self-realization as nearly all conceivable goals of education. However, with mentally retarded youngsters, it would appear that unless some measure of economic efficiency can be achieved, all the other aims of education are unsupported. Economic efficiency . . . can make a substantial contribution to the other aims. For many retarded individuals, work success may actually be self-realization. They exercise good citizenship largely by not becoming burdens upon society . . . . Even being worthy home members may depend upon their economic contribution or even upon so simple a fact as spending a major portion of their time at work. . . . Most of the educable mentally retarded can be trained to be independent in their living and even maintain families of their own."[1]

In noting the economic concepts taught in this project, bear in mind that I am working with children who are multihandicapped. They have a mental age of about seven, but concepts clear to the "normal" first grader may never be mastered by many of these pupils. Their attention span is brief, their motor coordination is often poor, and their ability to comprehend is limited. They will be able to hold only minimum-wage jobs and therefore their need for economic efficiency is even greater than that of the "normal" child.

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[1] Oliver P. Kolstoe, *Teaching Educable Mentally Retarded Children* (New York: Holt, Rinehart & Winston, Inc., 1970), p. 25.

My students started to learn some simple economics during the very first day of school, for they were taught to conserve our resources. This began with something as simple as learning how to avoid wasting paper and how to sharpen pencils so that they would last longer. Economics was taught in some way or other during every day of the school year, ranging from a "spur of the moment" exercise to a formal unit. The economics lesson was sometimes a five-minute "filler"—sometimes a major project. A few of our learning activities in economics are described below.

Books We Have Written

Some of the goals of this activity were to incorporate economic ideas into basic academic activities, to help the children to understand different kinds of jobs, to show them that money is used for purchases, to reveal that everyone can be a producer and that production is of great importance, and to help the pupils to gain experience in planning and choice-making. The basic economic ideas to be conveyed were:

- Producing goods and services is a valuable and essential contribution to society.
- Money is a medium of exchange and a standard of value.
- Income may vary with a person's work performance and the kind of job he or she does.

The first step was to explain to the children that we needed something to sell for the school bazaar. We then discussed the possibility of making books to sell, and the youngsters were introduced to such new words as "author" and "illustrator." The students were asked to choose a title for their book, write one sentence, and illustrate it. They worked in groups, dividing the tasks so that one might be writing while another was illustrating it. Some were cutting out magazine pictures and writing stories about the pictures. The pages were laminated, covered with naugahyde, and stapled to make the books.

In evaluating this project, I looked for neat and clean products with legible writing and correct spelling. Illustrations were to be appropriate for the story, and each story was to be at least four sentences long. The results, however, indicated that my expectations were too high. They could not write a four-sentence story; the handwriting was poor; the illustrations were not appropriate; and they could not even spell correctly when copying material from the chalkboard. I include this project, nevertheless, to illustrate the difficulties one has when working with children who cannot cope with abstract concepts. The children did work hard, however, and they did learn some new words.

The Family

The goals of this unit were to show that all family members have needs and wants, that choices must be made because family income is limited, and that the children have a role to play in the family. I wanted the students to understand that they can help to make choices related to the family's income, thus giving them a feeling of responsibility.

Ditto sheets produced by Jenn Publications were used for this unit. For example, one sheet shows a mother, father and two children working together to prepare a family meal. Some basic facts about families are given on the sheet also. The students would read and discuss the sheets. At first this would be a simple identification of the family members and what each was doing, but then we would go into the making of choices and how the family's income influences those choices. The child's influence on the family choice would be noted. The children enjoyed talking about their own families and how they help to choose how the family spends its income. This was what I call a "filler," for it can be done in fifteen minutes and can be used to fill time after one activity has been completed and you are waiting to go to the gym or have a music lesson. It not only keeps the students busy, but it is fun for them and teaches them some basic economic facts (choice-making, in this case) that they will be able to use all their lives.

Cowboy Vests for West Side Bazaar

This project was to show the children that there is a difference between necessities and luxuries, that wants and needs vary from family to family, that we must organize our priorities, that everyone must make choices because of income limitations, that resources are limited, that some goods are durable while others are consumed quickly, and that nearly everyone can be a producer. It was also designed to give them experience in making and carrying out plans, learning to conserve resources, handling money, and exploring different jobs. The economic ideas listed for the previous units were to be repeated and reinforced here, but with the addition of the following:

- The real cost of any item is the opportunity foregone to obtain other items with the same resources.
- Wants are constantly changing and never ending.
- Savings can contribute to the satisfaction of future wants.
- Planning and budgeting help consumers to allocate their incomes more wisely.
- Some workers produce goods while others produce services.
- Some goods are nondurable (quickly consumed), and some are durable (slowly consumed).

Several filmstrips were used in this unit, including "A Day in the Life of a Dollar Bill," and "You the Consumer." Newspapers and television were also employed, and several resource people helped. During a class discussion we talked about things the class might make for the bazaar, such as pot holders and cowboy vests. It was decided that cowboy vests would be made, and that an assembly line would be organized for this purpose. Thus, the children with poor visual motor skills and laterality and directionality problems could work on such things as selecting materials and placing pieces of like materials together.

A cardboard pattern was made for the pupils to use, because paper patterns were too easily torn. One student would hold the pattern in place while another did the tracing. Other students who had good motor coordination would do the cutting. Three holes had to be punched across the shoulders and three under the sleeve so that the laces could be put in to attach the back to the front. (Naugahyde was used for the vests.) Only students with good figure-ground perception could do this. A youngster with good motor coordination would cut the strings to the proper length and width. Lacing the pieces together was difficult, even though it was done in the same way that we lace up our shoes.

Thus, a job was found for each student, based upon the individual's ability. They were allowed to change jobs and even to try tasks they had difficulty doing. After about a week of practice, each child took the job he or she liked and could do best. Workmanship improved, and production increased. As many as seven vests were completed in one afternoon. A discussion was held to determine what prices to charge for the vests. We made a chart to show the various costs that had gone into the production of these goods. Posters were produced to advertise our products, and these were placed around the school. In addition, the pupils decided to present "commercials" to other classes. Five students would wear vests and go to the other classrooms to sing our song: "Cowboy vests, Cowboy vests, West Side's Best Cowboy vests."

One student would explain that the vests were made out of leather-like material and then hold out a sample vest for the class to see. Another would hold out decals and initials and say, "You can have a horse, a calf, or your name on your vest." A third student would ask, "Who would like to have one?" Each child wanting a vest would place an order on a sheet of paper which required the approval of the parents. When the sheet was returned with the money, my students would custom-make a vest for that individual. A total of 38 vests were produced to order in this manner. Of course, the students were learning new words during this activity, such as buy, sell, and bazaar. In addition to the vests, the children were also producing pot holders and models of covered wagons. For handwriting exercises, the pupils were copying such verses as the following:

My hands don't look so special
But they can do a lot,
Like make a cowboy vest
Or fill a flower pot.

They are just two ordinary hands
But I can make them do
Some extraordinary things
If I just want them to.

The point to emphasize here was that hands can do a good job now working on vests and other things, and later on when they go out into the working world they can continue to do a good job.

The children also copied a letter to be taken home to the parents, telling them about the bazaar and inviting them to come. Newspapers and television were contacted for publicity, and some articles about the bazaar appeared in the local papers. The TV station also showed the bazaar in action on a news broadcast. A schedule was made of the times the children would work in the booth, and arrangements were made to have adults assisting them.

Our customers were delighted with their cowboy vests, which had been delivered to them in their classrooms. Other items were sold in booths at the bazaar. The children helped to decorate the booth. My pupils also visited the bazaar as customers, but before doing this we had lessons on good shopping habits and on making change. Later on we figured out how much profit was made from the bazaar and which items had been the best sellers. One economic lesson learned at this point was that the best selling item is not necessarily the one yielding the most profit. In this case, the production cost of the most popular item had been high, and it was also possible that we had priced it too low.

This project had lasted a month, and I believe it was very successful. This is a long time for these students to stay with one thing, but their enthusiasm was high throughout. They learned how to budget their time and be more productive. They took pride in a job well done. Many adults were amazed at the quality of the work the children did. We had made a profit of $128.55 from the sale of vests, covered wagons, plants and pot holders. Regular academic work was not ignored, but was integrated with economics. The children learned the importance of effective communication and gained confidence in their own abilities to do something useful.

A Trip to the Skating Rink

This activity was designed to make students aware that income limits the satisfaction of wants, to encourage them to produce services, and to show them how to budget their money. Many of the previous economic ideas were to be repeated, but in particular this unit would teach that planning and budgeting help the consumer to allocate his or her income wisely, that if we postpone present consumption we can save for future purchases, and that the production of goods and services makes a contribution to society.

The children were asked if they would like to go skating instead of having a Halloween party and were told that it would cost $1.50 to skate. When many replied that their parents would not give them that much money they were told that I did not want the parents to give them the money. There were four weeks before the skating party, and they would have plenty of time to earn the money or save money from their allowances. We discussed the jobs that children can do to earn money, such as doing various chores for relatives and neighbors. A time was set aside each day to collect the money the children brought and to have them tell the class how they earned it. They began to see that a nickel or dime saved could soon add up to $1.50, and they learned to count and to distinguish between coins of different values. The students were also encouraged to plan ahead and to budget their savings. As a result, every student was able to go on the skating trip.

School Bond Election

This unit was to show pupils that schools are financed by taxes and that taxes are paid by the public. The new economic ideas to be learned included the fact that governments provide goods and services that people cannot obtain individually, that government has the power to tax, that a tax is a cost to businesses and households (but income for government), that many people make demands on government and that some of these demands conflict, and that people have some influence over government and how it spends tax dollars.

The people were about to vote on a school bond issue. I obtained a sample ballot to show the students and went over it with them to explain each question in detail. I emphasized the fact that voting is one way in which the people participate in government. The children were also able to see a voting machine and how it works. The new words added to their vocabulary were tax, mills, bonds, ballot, ad valorem, and property. They saw that taxes are used to build and operate schools. After they had acquired an understanding of each question and saw how it would affect them and their parents, I had them vote. I agreed to cast my own vote in the same way that the pupils had voted in the classroom. We had discussed the ways in which they might be affected by the outcome of the election. Thus, in some small way these children participated in an election. They saw how government relates to one of their daily activities—their own schooling.

Community Workers

This part of the project helped the children to develop an awareness of community workers and their jobs, and an appreciation of the contributions made by workers. They were to learn the difference between the production of goods and the production of services, and to see how our city government provides services with its tax revenues. It would become clear that families share the cost of many goods and services through the taxes they pay, and that the city government helps to keep the city orderly and healthy. The things we get from government are not free, but are paid for by the people through a variety of taxes.

The children are aware of police officers, firefighters and teachers, so we began by discussing these producers of services and how their salaries are paid. This led to a discussion of taxes and how tax revenues are used. A police officer visited the classroom to talk to the children, and a field trip was taken to the police department. We also discussed who pays the salaries of producers in the private sector, such as service-station attendants, druggists and grocers. Ditto sheets about community workers were passed out and discussed. A bulletin board display about community workers was arranged. It was divided into two sections, one headed "Taxes Pay Me" and one entitled "Business Pays Me." The pupils would have to decide which part of the board should include their pictures of particular workers. They also made scrapbooks about community workers. Later, the bulletin board headings were changed to "Producers of Goods" and "Producers of Services."

One means of evaluation was to note the extent to which the children were able to place pictures under the correct headings. They had some problems with this unit, however, for they became confused about taxes. They realized that taxes are used to pay police officers and firefighters, for example, but became confused about the grocer because they pay taxes when they purchase food. They also thought that a service-station attendant was both a producer of goods and of services because he supplied them with a good when he put gasoline in their family's cars. They enjoyed this unit, nevertheless, and learned to respect public servants. They also realized that public property is paid for by everyone and that if they destroy or damage it they are wasting their own money.

Dale Learns About Money

This was not a formal unit, but it does show how one can help a youngster to change his behavior and learn an economic concept. Dale was a very small boy in my class who could not take "no" for an answer and who was always kicking the furniture or throwing his money around. One day he wanted to buy a pencil, but we discovered that he did not have enough money. He had only four cents, while the price was five cents. I told him to save his four pennies and bring another one from home tomorrow. He threw his pennies on the floor, saying that they were no good because they wouldn't buy what he wanted. This same sort of thing happened again and again throughout the school year, but I could not convince him that the money would have value if only he would save it until he had enough.

During the first week in March another class was making and selling cookies. Dale had saved 15 cents to buy a cookie, but as luck would have it the class ran out of cookies just as it came his turn to buy one. He threw his money on the ground. Later, more cookies were made and brought around to the classrooms for sale. I asked Dale if he wanted a cookie, and he said yes. He tried to give me three or four cents for the cookie, but I told him this was not enough. We discussed his behavior and he came to realize that if he had saved his money he could now have the cookie. He did not get the cookie, but he had begun to learn something. Later, when popcorn was being sold Dale was doing a little kicking and griping so I asked him what was wrong. He looked up with a smile and said, "I don't have enough money for popcorn, but if I save it, I might have enough to buy it next time." He then put his money in his pocket and walked off.

A Train Ride

This project was similar to the trip to the skating rink, and it dealt with the same basic economic ideas and goals. I asked the students if they would like to take a train ride, and explained that it would cost $1.25 per ticket. One boy said: "Let's earn the money like we did to go skating." The same procedures were then followed as for the skating trip. We took the train to visit a museum. The pupils were asked to tell the class how they had earned the money for the trip, and this time they showed more self-confidence in their ability to earn the money. Several parents commented on the value of this unit, for the habit of saving and planning ahead began to be implanted, as opposed to the desire for immediate gratification that typifies the retarded youngster.

Producers of Goods

The children had had an experience in producing goods when they made and sold cowboy vests and other items for the bazaar. This unit was to reinforce their earlier learnings and add some new dimensions. Now they would learn about the factors of production (labor, capital goods and raw materials) needed to produce goods, and how those factors are combined. The role of management would also be taught. They would see that profit is what is left over after all costs have been paid, and that there must be a market for one's products before a profit can be made.

Now it was decided that we would plant seeds and grow flowers to sell at the bazaar. Trays were made out of milk cartons, cut in half. We practiced division of labor. One child would put vermiculite in the cartons, another would plant the seeds, a third would put in more vermiculite, and a fourth would soak the seeds with water. The students were responsible for placing the trays under the "gro-light" and keeping them watered. As the seedlings grew, they were transplanted to individual cartons. A record was kept of all expenses, and an advertising campaign was begun. (We viewed the filmstrip "The Commercial.") Posters and flyers were made to promote our products. The children also made a booth to be used at the bazaar. We tried to find the best "mix" of capital, labor and natural resources. Many plants died because of insufficient warmth under the "gro-light," and this taught the children that they must care for their plants. We did make a profit of about $4.00, however, and the pupils had been taught to deduct costs from revenues to determine profit.

Money and Banking

The students had learned about money and had had considerable experience in counting and making change. Now they would learn about banks and what banks do. I wanted them to know about the different types of accounts, loans and interest. They would see that checks are a form of money also. We viewed the film "A Day in the Life of a Dollar Bill" several times. The children drew pictures to illustrate what they saw in the film, and we took a trip to a bank. The film "It's All Mine" and the filmstrip "Where Does Your Allowance Go?" were among the other audiovisual materials that were useful. During our discussions it was emphasized that money and banking would help us with our bazaar.

To determine what they had learned from this project, I had them draw what they liked best about the trip to the bank. Although some drew the vault and the safety deposit boxes, several included the various services that banks perform. They were able to illustrate the uses of money. They were taught to honor their obligations when borrowing money.

Conclusion

The descriptions of the activities given above are brief summaries of what actually happened in my classroom.* It is not being suggested that abstract economic concepts were grasped easily by these children. It took a great deal of time, patience, understanding, and even tiresome repetition. The rewards are evident, however. The change in Dale's behavior was nothing short of dramatic, and all of these mentally handicapped children should now be better able to handle money, plan their expenditures, and learn to become productive citizens in our society.

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* The complete report, plus supporting materials, can be obtained from the Vernon R. Alden Library, Ohio University, Athens, Ohio.

Roots and Us

A Third-Grade Economics Study

Mary Dell Johnson
First Ward Elementary School, Pine Bluff, Arkansas

Introduction

As the school year began I worried about a boy who was sitting in our room and doing nothing but looking out the window day after day. I kept telling myself: "I don't think you ought to just let him sit." Surely, he had to be interested in *something*. Then I discovered that Anthony, this daydreamer, had a deep interest in the television series "Roots," and that my other third-graders were also fascinated by this program. I had not capitalized on this interest, however, for fear that the five white children in the class would not be sufficiently motivated and because our administration wanted us to build links between various backgrounds, individuals and races.

Ours is a "disadvantaged" neighborhood in a town of 68,000, with three-fourths black and one-fourth white. The image of the low-income neighborhood is one of crime, drugs, unemployment and dilapidated homes. As bleak as any realistic picture of poverty must be, however, we can try to provide openings in the clouds to give the economically deprived child a glimpse of other worlds. A one-day economic eduction workshop that was held at our school gave me the idea of using economics as an exciting way of building those links and of relating the TV program "Roots" to the problems of today.

During the workshop in economics we were exposed to ideas presented by teachers and resource people and to a tremendous display of materials. Questions were raised about how we were going to teach economics while teaching the "basics." Our principal stated that "Reading, writing, and arithmetic will have little value if the child does not understand the world in which he or she must use those basics." This statement induced me to learn as much as I could about economics and how to teach it to third graders. I studied the guide *Economic Education for Arkansas Elementary Schools*, published by the Arkansas Council on Economic Education. The following are some of the specific goals that were established:

- To help the children to become aware of the culture of black people, yesterday and today.
- To show how the cultural development of black people was related to economic patterns and developments.
- To help children to understand the concepts of scarcity, needs, wants and

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Note: This is an abbreviated version of a lengthy report. Those interested in seeing the complete report with supporting materials should write to the Vernon R. Alden Library, Ohio University, Athens—*The Editor*.

productive resources, and how these relate to one another.

- To present information about jobs and job opportunities, and to show the importance of education and training.
- To instill the idea that minorities can be successful in business ventures.
- To encourage students to think and to share their ideas.

Developmental Activities

After having watched the first part of the TV series "Roots," the children were full of enthusiasm for relating the programs to their classroom studies. We began by locating Africa on a world map, and the pupils then drew their own maps of Africa. We pretended to be shipwrecked off the coast of Africa with Kunta Kinte and his family. This led to a discussion of basic needs (food, clothing and shelter), and the children drew a mural depicting the tools that early Africans used to provide for their needs. They were also introduced to the concept of labor at this point. A comparison of Kunta's wants and needs with those of the children formed the basis for a fascinating discussion, and the pupils decided which of Kunta's possessions were wants and which were needs. The use of barter was brought in also. We constructed a diorama of an African village, and this illustrated the lack of modern capital goods and technology to produce Kunta's needs and wants.

Next we discussed how Kunta and his family used the available natural resources around them—soil, water, plants and forest products. We drew a large map of Africa, and the children drew pictures to illustrate the natural resources found on that continent. They prepared labels to identify the productive resources that Kunta Kinte and his family used to provide for their needs and wants.

Several disciplines were related to this study. During our science lessons we studied the plants and animals of Africa. In language arts lessons the pupils wrote stories and learned new words. Health lessons included analyses of Kunta's diet and its nutritional value. I have already shown how geography was used and map-making skills developed. The students drew murals, made masks and constructed dioramas during their art lessons. The making of drums and the learning of new rhythmic patterns became part of our music lessons. The class became so fascinated by Africa that they inundated the library with requests for books about that area. Some children even attempted to trace their own roots by looking through family bibles and interviewing older members of their families.

African foreign exchange students from the University of Arkansas at Pine Bluff visited our classroom and compared the simple economic system of Kunta Kinte with the economic systems of their countries today. They pointed out that the scarcity of capital resources has always prevented their people from producing the amount of goods and services produced by Americans.

The episode in which Kunta Kinte was kidnapped was alarming to the children. Our discussion of this segment led to a consideration of the scarcity of labor in America at the time and an understanding that today we are free to choose our jobs. Labor was identified as a human resource and—amazingly—the children themselves recognized that the slave ship could be categorized as a capital resource! The arrival of Kunta Kinte in America led to a discussion of the division of labor on the plantation, as illustrated by the different work of the house servants, field hands, blacksmiths, and so on. On a field trip to the Southeast Arkansas Arts and Science Center the children inspected an early American log cabin and noted the lack of "comforts"in a slave's quarters. We saw how our level of living has changed today, but realized that even now we lack all the resources needed to satisfy all our wants. The fact that the slaves were denied the privilege of learning to read caused the children to appreciate the educational opportunities they possess, and to begin to see that education can lead to a better way of life.

The class was pleased and proud when the principal exhibited our work at a regional principals' meeting and displayed our works of art in the hall of the school. After the final episode of the "Roots" series had been broadcast, we discussed the determination of Kunta Kinte's descendants to build better lives for themselves. This led to discussions of the job market and various job opportunities. We learned how and why job opportunities for ex-slaves were scarce after the Emancipation Proclamation, and how the "sharecropper" and "tenant farmer" systems worked. We also saw how the introduction of more agricultural machinery forced people to leave their farms and seek jobs in the cities. The growth of specialization was dealt with, and some of the children began to discuss the problems of older members of their families who cannot find work. We saw how the demand for goods and services relates to the demand for workers to produce them.

A day-long tour of the University of Arkansas at Pine Bluff greatly reinforced some of these learnings, as we toured the campus and saw how each department produces highly specialized workers. When we visisted the Elementary Education Department every member was there to greet us and each presented the class with an economic concept. For example, Dr. Clara Jennings, Head of the Department, introduced the concept of interdependence by explaining how the various specialists in our economy depend upon one another for goods and services. As we visited each department we not only learned about the kinds of workers trained and what they must study to qualify for employment, but what types of jobs are currently available. The children began to recognize the importance of their own schooling and began to identify their own interests in the various departments.

Finally, at the University we visited the Agriculture Department. The discussion of productive resources had been a continuous activity, and I asked the children to notice the use of specialized resources in the output of farm products. There was a lively interest in this Department, and this led us into the production of farm goods as a culminating activity. Through a visit to the Pines Vocational Technical School we sharpened our awareness of the fact that special training is needed for a great variety of jobs, and we learned more about the availability of jobs in the labor market. Back in the classroom the pupils were asked to classify the occupations according to levels of difficulty, rates of pay, the extent to which the work is exciting, being common or unusual, and whether or not they would be interested in holding such jobs.

While visiting some of the children's homes I became concerned about the fact that some were not being kept in good condition. We then went on a walking tour of the area with the director of the Southeast Arkansas Arts and Science Center, who had an appreciation of the old homes as examples of various types of architecture. He told the children that their houses were like people in that they have character and personality. He had them sketch the different houses and note the contrastng textures of bricks and shingles, and the varieties of windows, arches, verandas and roofs. A banker explained to the class how banks provide loans to help in making home improvements, and this led to a study of the role of banks in our economy. A simple flow chart was made to show the place of banks in relation to governments, businesses, homes and markets. The study of banks was also related to a study of personal and family finance, including family budgeting and personal saving. The term "opportunity cost" was introduced here, so that the children could understand that a decision to purchase a particular good or service with their income meant that some other need or want could not be obtained instead. They also learned that the savings of families can be used by the banks to make loans to businesses, and that the savers can thus receive interest on their money. Trips to the police department, city hall, and fire department gave the children a chance to see how their tax dollars are used. Not all problems can be solved by government, however, and the class identified the "cluttered" neighborhood as a situation that they might try to do something about. After discussing various ways of achieving the goal of having "neat neighborhoods," the students decided to launch a litter pick-up campaign and make a movie to encourage people to clean up the neighborhood. We wrote the script, produced the movie (also, an audiotape) and screened it for the rest of the student body. Even Anthony, the daydreamer, gave up some of his play time to pick up paper, and he was selected by his classmates to be chairman of the clean-up campaign.

Culminating Activity

The TV series "Roots" had helped us to look at our heritage and to see our role in the American economy. We learned that jobs are available to blacks who have an education, and that some black people are beginning to accumulate considerable wealth. I felt the need to show the children how wealth can be obtained and managed. We discussed ways of increasing our wealth through a class project. Some children wanted to plant a garden and some preferred to go into business and operate a store.

We tackled the problem first by noting that we would have to work with our available resources. We had a supply of labor, but did our workers have the necessary skills in reading, writing, math, spelling and the like? Was there enough interest in the various jobs to induce the workers to produce a product or service? We had a limited amount of space for the growing of crops, and the scarcity of this natural resource meant that we would have to use our capital and labor resources very efficiently. Would we be able to cover our production costs and make a profit?

To have a garden we would need such capital goods as plows, hoes and rakes. Fortunately, these could be obtained from parents and grandparents. We also had to decide how to divide the labor, and this was done according to student interests. Those interested in farming would work the land, while the others would serve as middlemen or storekeepers. Records were kept of the growth of the tomato plants, and daily changes in the climate were also observed and noted.

The "business group" made preparations for the opening of their market. We took a trip to a supermarket to learn how to display our goods in an attractive way, and to see how the workers in the store dealt with customers. Samples of advertisements from newspapers were brought to class to give us ideas for promoting our own products. A bulletin board display was arranged to illustrate the various uses of advertising media. Reading lessons were used to develop the vocabulary necessary to create effective ads.

A boy who was good at math was selected to be the store's first manager. He borrowed $5.00 from the bank (I served as banker) to cover the necessary "start-up costs." Employees were required to fill out job application forms and to be interviewed. After considering a large number of names, "The Mad Farmer's Market" was chosen for our classroom store. Posters were made and circulars were printed and distributed. There was so much enthusiasm for this project that the children actually complained when the bell announcing the end of the school day was rung.

Opening day was *not* a success. The pupils had to learn the hard way that they were in competition with other stores. Their parents, who were expected to buy their output, informed them that the prices were too high. They checked prices being charged in regular stores and reduced their own prices accordingly. They had to learn, also, that they could not sell their goods if there was no demand for them. Sales improved, and so did the business acumen of the children. They advertised tomato plants as "the special of the house" and made enough on these to start earning a profit. In fact, a local gardener offered to buy all the tomato and pepper plants they could grow. As experience in management was gained, various students took turns running the store. When the school year ended, the store had covered its costs and earned a profit of $23.00. Our workers had received wages, but they had to pay taxes on their incomes. We used the money taken in taxes to buy a new tether ball, and divided the $23.00 profit among the students who had made such a success of their enterprise.

Reflections

This report cannot adequately explain our economics project. One would have to be there—day by day—to *feel* what I and my pupils felt. It was a feeling of sheer joy. The children learned concepts that I would never have imagined eight-year-olds could learn. This was not mere rote learning, for they were able to use those concepts in a variety of activities. If a child can enjoy the learning experience, it is probable that the experience will be remembered and applied in future economic decisions. Only a few of our many activities have been reported here, and it would take another hundred pages just to recount all the fun we had. Most importantly, perhaps, I believe that optimism about the future was instilled in these children.

The Toy Factory

An Economics Curriculum in First Grade

Kathleen G. Payne
Adams Elementary School, Wichita, Kansas

Introduction

My 24 pupils were, for the most part, typical first graders. All came from middle-income families. Several were living with only one parent. In most of the two-parent households both parents had jobs outside the home; nevertheless, they showed an interest in the school's activities. Only two of the children had problems of an unusual nature. One of these had a learning disability and another had emotional problems. It was the latter boy whose behavior stimulated me to develop my first economics unit.

This particular child would actually eat his crayons or deliberately break them into two pieces, drop the pieces on the floor, and step on them. I had tried everything I could think of, but nothing seemed to work. Meanwhile, I was taking a course in economics for elementary teachers at Wichita State University and was required to make up a lesson module based on Lawrence Senesh's *Our Working World*. I wanted to use the ideas contained in this book, but my major concern was to relate the economic concepts to the needs of the children. The basic human wants for food, clothing and shelter were being satisfied for these children in their homes. For them to understand the "unlimited wants vs. limited resources" problem we would have to focus on a want of another nature.

One problem with which the children could identify was the fact that we needed fish for our very large aquarium. I did not want to buy the fish myself or ask parents to give money. This is the way things are usually done, but the children learn little—if anything—from it. My husband suggested that I let the children earn the money to buy the fish. I replied, "There's not much first graders can do to earn money. All we can do right now is color pictures, and 'crayon stomper' won't even do that!" Our conversation led to the idea that coloring had to be presented to "crayon stomper" in such a way that he would really want to color things. Perhaps we could make crayon pictures and sell them. The crayons were part of our limited resources, and perhaps if the "stomper" saw the need to make the pictures he would be less inclined to destroy the capital goods (the crayons) needed to produce them. Our Crayon Art Fair, as the unit was called, thus preceded the establishment of the toy factory that will be described later. It was based upon a need that the pupils recognized, and was motivated by a real problem that they had to solve. In the process of studying economics we would draw upon mathematics, science, career education, language skills, writing and art, as well as social studies.

Among the specific goals were to teach the children that

- wants are unlimited but resources are limited;
- we must conserve our resources;

- wise choices must be made in the use of resources;
- people depend upon one another for their needs and wants;
- division of labor can increase productivity;
- capital is needed to start and to operate a business;
- money is used to exchange goods and to measure values;
- prices are affected by supply and demand.

Learning Activities*

Not wanting to mandate activities, I waited several days for the children to discover a problem of scarcity. One morning while filling our tank with water one child exclaimed, "Mrs. Payne, we've got a problem. We don't have any fish for the aquarium." The whole class then joined in on a discussion of how we might get some fish. The suggestions ranged from getting fish from a grandparent's fish tank to obtaining money from a bank to buy the fish. When one suggested that their parents buy the fish, Cindy remarked, "But then they wouldn't belong to all of us." Finally the idea of a class project to earn the money emerged. With a few indirect hints, one student came up with the notion of making color pictures to sell. This was received with great enthusiasm by the class, for it was something that everyone could do. Immediately, crayons became objects of great importance to every child, and it was soon evident that the problem of "crayon stomping" was going to be solved.

But would anyone buy our pictures? To find out, we planned a survey of the other classes in the school. This was done as part of a math lesson. We prepared graphs of the replies and found that children from grades one through six would be willing to pay a penny apiece for our pictures. The children excitedly began to draw pictures, using every spare moment. And imagine the joy felt by the teacher when the "crayon stomper" turned out some of the most worthwhile crayon pictures.

I began to fear that they would work so fast that quality would suffer. But this, too, was taken care of by the children themselves. They began to look at each picture with a critical eye and soon established some rules for making good pictures. The pupils kept each other in line, for everyone seemed willing to accept the rules and do additional work on a picture that had not been deemed good enough for the Crayon Art Fair. For example, each picture had to tell a story, to be neat, to be pretty, to be colorful, and to be free from rips and creases. Stories such as Disney's "The Brave Little Tailor and the Giant" (available on filmstrip) provided them with ideas.

Every day someone would say, "We've got another problem . . ." We kept a list of all the problems that cropped up. Strange as it may seem, it was the "crayon stomper" who started a campaign to conserve paper. A half-finished picture discarded in the waste basket would be rescued and finished by the student. Indeed, this boy was given the title "head picture fixer upper." He would not let any picture be discarded if it could possibly be made into a finished product.

There were too few crayons to go around, and thus it was impossible for everyone to be working on their pictures at the same time. This led to a lively barter system, whereby those with surplus paper would trade paper for crayons. Those who traded wisely would end up with the right combination of productive resources. The children had to come up with solutions for a number of problems, and they often made very wise decisions. They decided to replace individual production with an assembly line to improve the output of birthday cards. They suggested a visit to an art museum to learn how best to exhibit their pictures. They found that they would have to prepare advertisements to promote the sales of their product.

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* Because space is limited, only a brief summry of the original report of 126 pages can be included in this booklet. The complete report can be obtained from the Vernon R. Alden Library, Ohio University, Athens.

As the date of the Art Fair approached, the children worked more feverishly. Tables were decorated and displays were made. The "crayon stomper" made a large teepee of paper to display several Indian pictures. Specialized jobs were assigned to various "workers." Experience proved to be a good teacher. After one group of customers had visited the fair (the second graders were the first to come), the class decided that a better arrangement of the pictures was needed. The children insisted on doing things for themselves. Our cashier refused his mother's offer of help with the handling of the money. The fair was a success. We not only sold every picture, but even had offers for the decorations! Our total revenue of $19.30 was far above the $3.00 or so we had expected. The class acquired a feeling of confidence, for their work was actually valued and wanted by other people. More important, perhaps, is the fact that they had identified and solved their own problems. And "crayon stomper" no longer existed, as such.

After the Art Fair the class not only had the fish they wanted but a surplus of $11.45 to use for some future want or need. In early November they viewed the filmstrip "Tonka Toy Factory," which gave them the idea of establishing a factory in the classroom. The filmstrip had shown them how a factory is organized and what factors of production are needed. The class then did research in craft books and magazines to find ideas for toys they would be able to manufacture. They had to consider available resources, including waste materials that might be recycled. They still had crayons and paper, and they had gained valuable experience in graphic design. One boy produced a graphic design for a "Fireman's Game" that could be mass produced. Thus, he became the first department manager. A girl then developed a "Happy Face Game," and she too found herself in a managerial position, faced with all the problems that such a position entails. Some pupils worked individually at first, but as time went on they began to find that they could improve production by working together. A "Coloring Book Publishing Company" was formed and used the assembly line method.

The children learned the need for planning and efficient organization. The Toy Factory grew, and more departments were added. One manufactured play money, while another produced puppets made from tin cans. An employment office was established and "want ads" placed on the bulletin board. A payroll system was set up, so that workers could receive wages and managers could get salaries. A bank was created in which employees could deposit their earnings. An awareness of job responsibilities emerged, and children learned to work together.

More and more departments were created, and soon there was a scarcity of workers. They discovered the concept of interdependence, for they had to work together to overcome a number of problems. A supply house had to be opened, introducing the need for another kind of record-keeping. When money ran low, stock certificates were issued to raise more capital. Some had to borrow from the bank to obtain needed supplies. These problems were, of course, related to math lessons. The company even had to initiate a training program to give some workers the necessary skills.

As "Grand Opening Day" approached, prices had to be determined for each toy, sales slips had to be prepared, signs had to be made, and a coding system had to be established for each item. Pupils from another elementary school made a trip across town to shop at our store, buying no fewer than 100 toys. Our students had their first experience as sales clerks. Graphs were made of the number of different toys sold. This showed which items were most popular. It was decided that we had to increase our advertising for items that were not selling well. For example, a large pirate ship was made to advertise the "pirate's toys." Seeing the need for maximum eficiency, the class decided that each worker would now be placed only in jobs in which he or she had had experience. After the second "wave" of customers had visited our store, we found that we had to reduce the prices on some items. Before long, every toy had been sold.

An Analysis of the Outcomes

It is possible to analyze a learning experience of the type described above by examining each phase and preparing a step-by-step account of each phase. The format I used for this was to start with the "Emerging Economic Idea." For example, at the beginning of the Toy Factory project the emerging economic idea was the conflict between unlimited wants and limited resources which necessitates the limiting of present consumption to ensure future production. Next, the "Pre-Active" phase was described. This provides background and shows what went on before a classroom activity took place. The "Pre-Active" phase at the start of the project included the Crayon Art Fair, for example. Then there is a "Vocabulary" section which lists key concepts and defines them. The terms wants, savings, and work were listed for the very first phase of the Toy Factory project. This is followed by a narrative account of the classroom experience, with verbatim quotations of some comments made by the teacher and the pupils. This shows how the activity was motivated, developed and culminated. One motivational factor in this case was the question of what to do with the $11.45 we had left after the Crayon Art Fair. Another was a discussion of pets, engendered by my wearing of a badge containing the head of a horse. (The children knew that I owned a horse.) The badge had been made in my economics class, using a machine that costs about $36.00. Almost immediately the pupils began to discuss ways of earning the money to buy such a machine, and thus the idea of the Toy Factory was born. Finally, there is a section on "Evaluation." Thus, evaluation is an on-going and developmental process, and not simply something that occurs at the end of a unit of study. For instance, during this early part of the project I noted that the children did not expect to obtain money for the machine from parents, the principal or the teacher (as they had before the Crayon Art Fair), but quickly suggested that they earn the money themselves. I considered this to be evidence that a valuable lesson had been learned, and that there had been an important attitudinal change. Altogether, nearly 30 phases were described in this fashion for the Toy Factory project. Although this requires a great deal of time and work, it results in a very detailed account of the total learning experience, provides both an on-going and summative evaluation, enables the teacher and other educators to analyze the project, and provides clear "how-to-do-it" guidance for others who might wish to adopt this strategy for teaching economics.

Objectives had been stated for each part of the project (such as learning to use graphs to keep records of sales), and these were usually specific and measurable. The children did learn the meanings of economic terms, such as profit, measure of value, bank, capital, specialization, scarcity and interdependence. They learned them by experiencing them, not through rote memorization or abstract theory. In addition, however, there were valuable outcomes that cannot be measured objectively. Communication barriers between children were broken down as they shared their interests and cooperated in a common effort. They learned to appreciate the value of efficiency and hard work. They became self-reliant and had the great satisfaction of producing something that others saw as having value. Many letters from parents as well as from other educators attested to these outcomes.

Finally, I have seen a change in myself as a teacher. When I began my course in economic education I hardly knew what economics meant. Through the encouragement of the instructor, the other students and my husband, and through a give-and-take with the sharing of ideas, I began to have the confidence to go ahead and teach things that I thought I was not prepared to teach. I let the unit evolve, and I learned as problems arose. I let the children work out the solutions to these problems. Because of this the scope of my teaching was enhanced and my enthusiasm for economic education grew tremendously. I strongly recommend economic education to other teachers.

Socioeconomic Action—We Pay for Play

Economics for Second Graders

Arlette Miller
Fair Park Primary School, Little Rock, Arkansas

Introduction

Although we live in a free enterprise economy, government plays a major role in economic affairs. I decided to teach economic concepts to second graders as those concepts relate to government, and I developed learning experiences to achieve the following basic objectives:

1. To see the role of government in meeting consumer needs and demands.
2. To understand the economic factors relating to the financing of government functions.
3. To learn and to apply principles relating to resource analysis, budgeting, modeling and planning.

One of the second grade books included a suggestion that pupils design and build a model park, and this seemed to be a good vehicle for actively involving the children in problem-solving and decision-making. Fortunately, our city was in the process of planning a new park complex, and perhaps we could participate in some small way. I contacted the Director of City Parks and Recreation, and he suggested that the children design and select play equipment for the park complex being planned. This made our project much more interesting and meaningful, for we learn by doing, and purposeful activity stimulates and motivates learning as nothing else can.

In the process of designing and building a model park and playground, the students would learn to work together cooperatively. They would begin to understand such economic concepts as specialization, interdependence, opportunity cost, the circular flow, the factors of production, and human needs and wants. They would learn about our different levels of government, community and city relationships, and how "government by the people" works. Such skills as map-reading were to be taught, and the children were to have opportunities to make decisions, solve problems, improve their reading, organize information, and identify their own feelings and values.

Learning Activities

Using the steps set forth in the book *Economic Education for Arkansas Elementary Schools*, I designed a problem-solving poster. The children were shown how to use this model to work out problems. It was not long before a real problem situation emerged. Two children actually came to blows over who would be first to use some play equipment. With the whole class looking on, we referred to the chart and discussed this problem. First we identified the problem, and then decided what our goal was—to get along well with each other. Next we discussed the choices available—fight it out, play elsewhere, let the playground aide make a decision, or take turns. The children decided that taking turns was the best choice. The pupils began to realize that as we live and work together we must follow certain rules. Classroom rules were formulated by the group in a democratic fashion, and those rules were written on a chart that was kept on display.

The concept of interdependence was taught through a study of community helpers and of the ways in which families need each other. The children drew pictures on one half of their papers showing a situation depicting a need, and on the other half they drew the producer who meets that need. Each picture was displayed on the bulletin board and the artist told about his or her picture. The idea that we need each other was continually stressed and applied in helping one another, in cleaning up the room, and so on. We saw how I as a teacher need other producers to provide the goods and services I use in educating children. The film "Goods and Services" served as a stimulus for language arts stories about our roles as consumers, and we read the poem "At Your Service." Several other economic concepts were introduced in various ways. We dealt with choice-making by discussing how a girl might spend a dollar, noting that the items she did not buy instead of the doll she chose were her opportunity costs.

Map studies included learning about boundaries, and how they help to identify governmental divisions. A chapter in our textbook dealing with the payment of dues to clubs was used to introduce a parallel situation in which people pay a portion of their incomes to the government in taxes. A circular flow chart was developed at this point for a bulletin board display. This showed how government uses its tax money. Just as in the payment of club dues, we give money but we get something back as well. Pictures of government buildings, such as the nation's Capitol, were displayed. Good citizenship was stressed, and one boy learned how his mother (a Vietnamese) could become a United States citizen. We used role-playing to learn how the city council meets and how laws are enforced.

It was not until March that the idea of having the children design a playground and build a model park began to be implemented. The Director of City Parks and Recreation visited the classroom to discuss the project with the students. At about the same time, we were reading the story of how Frederick Olmsted designed Central Park in New York City. Thus, the class was enthused about the visit of our own Director of City Parks and was prepared to ask numerous questions. They learned, too, that he was a producer who provided a service through our local government and who derived his income from our taxes. About two dozen questions the children had dictated in advance were listed on the chalkboard.

The following week a designer with the Parks Department came to the classroom and spoke to the children about how to design a park. He brought a contour model for us to see and showed us the design for another new park in Little Rock. Each child received a design and plan for one of the parks. He explained how costs are estimated, and listed on the board the things the children should include in their design for the park. He warned about such things as putting baseball diamonds near busy streets. The students then began to draw designs, and work was begun on a model park. We took a field trip to the site of the park to observe the terrain and see where the playground would be located. This also became a science lesson, for we studied the natural environment, types of trees and the like.

One of the most important activities was the selection of the equipment that would be needed for a playground. The children worked in groups to examine catalogues, discuss costs, and make value comparisons. We knew how much money would be available for the equipment ($13,000), and now we had to decide how best to use our scarce resource. The class had already been introduced to the fact that money is a medium of exchange, but math lessons were needed to help them to understand how much $13,000 is. After the costs had been studied for each item, we took votes to see which ones to select. When more than one model was available, they would select the one that "had the most things on it" and would thus do more for the money it would cost. Consideration was given to a variety of equipment so that handicapped children and even babies would have something they could use. It was realized that the equipment they did not choose was our opportunity cost. An architect who also works as a volunteer in the schools helped us with our design and model. She taught the children how to measure accurately and how to make scale models. The youngsters often proved to be quite perceptive, as when they suggested that picnic benches should be placed near the playground so that parents could eat while watching their children play.

Two pupils were elected by the class to choose the best design. It is interesting to note that they came to the same conclusion that I and our visiting architect had reached. The problem-solving approach was used throughout. In deciding on the best plan for a bike trail and playground they actually combined the best ideas from two pupils' designs. We used this incident as an example of representative government in action.

The children became specialists, using the aptitudes and skills they were developing. Some were "building specialists," some were painters, some were playground equipment constructors, and so on. Our model was taking shape and beginning to look like a real park. When it was completed we held a "Parent Party" so that mothers and fathers could view our work. A contest had been held to see who could design the best cover for the invitations, and the students voted to decide which design to use. The children explained our project and such things as the circular flow model to the parents. Pictures of our field trips and various phases of our work were on display, along with examples of the pupils' stories and poems.

The officials from the Parks Department could not attend the party, but they did come to our class the following week to receive our park model and our analysis of the costs. The Director promised to try to build the playground as the students had designed it and with the equipment they had chosen. He arranged to have our park model put on display in the City Hall.

Outcomes

Our regular school routines had been followed while the class was building the park model, but the learnings from that project also had an effect on other parts of the curriculum. The best evidence that learning has occurred is that the student applies a fact or concept to a different situation. For example, when one pupil remarked that she loved the "free" books in our library I asked her if they were really free. She replied that the people who pay taxes to the government that buys the books for us bear the cost of the books, and thus they are not free. A mother who happened to be helping in the library at the time was astounded by the child's reply and said that she wished all children would learn this concept. Our study of natural resources was related to lessons in science, and there was a poster contest for soil conservation week. During creative writing the pupils wrote stories about what would happen if our natural resources were used up; and we discussed human and capital resources as well. When a dentist visited the school during dental health week we talked about him and his nurse as producers of a special service, and noted how technology helps to make them more effective.

The incidental learning that took place was immeasurable. The park model was a huge success, and many adults could not believe that it had been produced by children of this age. We had a constant flow of visitors to our room to see the model, and we explained our work to other classes.

There seemed to be a "ripple effect," as skills developed during the park model project were transferred to other situations. For example, the things they had learned about measuring and drawing were used later when the children were making "thank you" cards. (This was done at their own volition.) The children became more observant. Several reported to the class on news broadcasts concerning our government; and many asked questions about the functions of government. The results of both a teacher-made test and a standardized test (the Primary Test of Economic Understanding, available from the Joint Council on Economic Education) showed that most of the basic concepts included in those tests had been learned.

Some of the most important learnings cannot be measured by tests, however. The sense of pride in accomplishment and the feeling of group togetherness were evident but impossible to measure. Arrangements were made to let the class make a formal presentation of our park model to the Mayor of Little Rock. Two TV stations and a newspaper covered this event. Imagine the excitement when the children saw themselves on two different news programs on the same day! Articles about us appeared in two newspapers. There were other rewards as well. While we were touring the City Hall we visited the Parks Department office and were delighted to see our "thank you" poster on the wall behind the designer's table. An organization of school volunteers also publicized our work. These unexpected outcomes provided the perfect ending to a fun project. The enthusiasm for learning about government and our economy generated by being involved in an active and meaningful way will, hopefully, grow as the children mature and become adult citizens coping with the problems of tomorrow.

Note: This is an abbreviated version of a lengthy report which also included much supporting material. The original project can be obtained from the Vernon R. Alden Library, Ohio University, Athens—*The Editor*.

APPENDIX TO CHAPTER 1

Good Ideas in Brief: Primary Level

MICHELA HAVENER of *Fairview Elementary School* in *Fort Smith, Arkansas*, taught her second graders economics by relating the basic concepts to something very familiar to the children—the "houses we live in." The pupils observed the differences in the houses they saw while on the way to school and arranged a bulletin board display on houses. They learned that natural resources, labor and capital resources are used in building homes, and that division of labor makes home-construction faster and more efficient. They also saw how competition affects the home-building industry and how the profit motive stimulates construction. Local industries involved in housing construction (such as a brick factory and a sand and gravel company) provided brochures and other useful information. A study was made of local resources used in the building of a house, and the children made scrapbooks to illustrate their findings. Analyses were made of the effect of consumer demand and of why the prices vary for different kinds of dwelling units. The role of banks was studied, and the law of supply and demand was applied to the local housing market. The costs of operating a house were also examined, as the children learned about mortgages, utilities, taxes, insurance and the like. Poems about houses, stories, dramatizations, field trips, resource persons, and games were used liberally. The Primary Test of Economic Understanding was administered on a pretest, posttest basis. A substantial gain in the mean score suggests that one can teach a great many economic concepts simply by focusing on one industry in which children have an interest.

ELLEN J. LORBER of the *Centennial School* in *Bloomington, Illinois,* capitalizes on her first graders' interest in fairy tales to teach some basic economic principles and concepts. For example, the children discuss the needs and wants of the characters in "Goldilocks and the Three Bears," illustrating these with drawings and cut-outs. "Props" consisting of teddy bears, a doll, chairs, and the like, are used to add realism. The concepts of needs and wants are applied also to "Little Red Riding Hood" and "The Three Little Pigs." The children draw pictures of the characters and of their needs and wants, cut them out, and paste them in a "Needs and Wants Book." Films, records, flannel boards, and games are used also. Other concepts taught in this manner are goods, services, producer, and consumer. Ms. Lorber developed a 24-item nonverbal test to use on a pretest, posttest basis. Although there was a five-month interval between test administrations, the gain in the mean score was substantial and statistically significant.

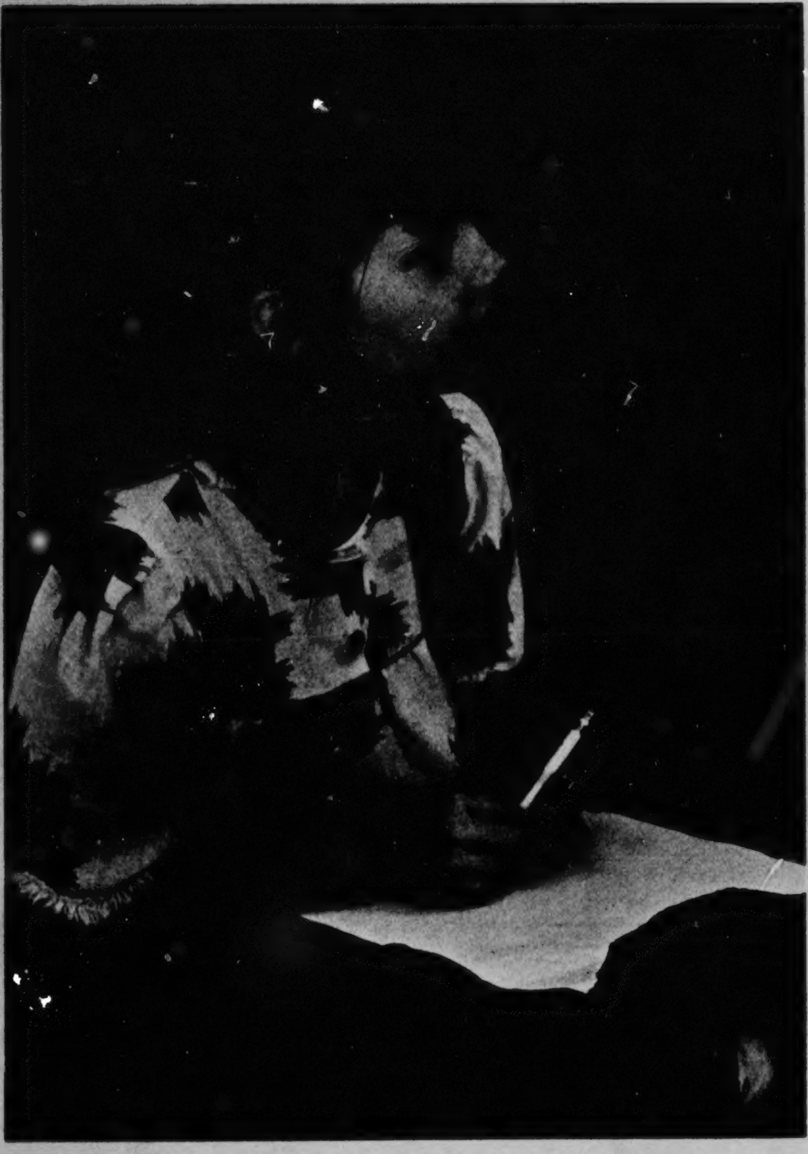
HARRIETT B. WILSON, a volunteer in the *Head Start Project* in *Rome, Georgia,* has developed a number of lesson plans and activities to teach some economic concepts to very young children. To show how the things we need and want are produced, Mrs. Wilson prepared flip charts depicting a factory, tools, machines, workers, etc. This was followed up with an activity in which the pupils themselves became producers of Kool-Aid and had to determine the various steps in the production process. To teach the concept "specialization," Mrs. Wilson wrote a story, "The Three Little Pigs Who Learned to Specialize." The story showed how a family of pigs could produce more if each specialized in what he or she could do best. The children then discussed specialization in their own families, and noted how specialization is used in such familiar enterprises as grocery stores and dairies. The children were divided into two groups to produce pudding, revealing that the group employing specialization was more productive. Role-playing situations were set up to teach the circular flow, the functions of money, and the role of banks. The youngsters learned what taxes are, and another set of flip charts was prepared to show the various services provided by government. Learning centers were established in the classroom where children could acquire skills in counting money, identifying prices, and shopping for goods. The culminating activity was a "flea market" in which the children were able to buy and sell goods. Mrs. Wilson used a simple test on a pretest, posttest basis. The mean score on the pretest was 63.6; on the posttest it was 80.2. (Only a few of the activities have been included in this summary.)

DOROTHY YOHE of the *Fern Hill Elementary School* in *West Chester, Pennsylvania,* has developed a large number of techniques and materials for teaching economic concepts to kindergarten children. A "Kinder Shopping Mall" was set up in the classroom containing a simulated bank, florist shop, shoe mart, gift shop, travel agency, and other "businesses." A V.I.P. ("Very Important Producers") Club was formed to make the children aware of the many people—from laundry workers to police officers—who provide us with goods and services. Local resource people became members of this Club. A "Mix and Match Game" was created, consisting of three types of cards representing occupations, capital goods (tools and equipment), and letters of the alphabet associated with the occupations. Cards are dealt, and the winners are those who can obtain a set of three cards that go together—one showing a particular occupation, one depicting the capital items used in that occupation, and one giving a letter associated with the job. In the "You Guess Who!" game the children get "cartoon career cards" and act out the occupation depicted on the cards. The first child to identify the occupation the actor is pantomiming becomes the next performer. A "Consumer Day" is held, during which the children can buy items donated to a "school general store." The money is donated to the Cancer Fund. This is followed by an analytical exercise in which the children compare the prices they paid for their purchases with prices for similar goods charged in nearby stores. They attempt to explain why the school store can charge lower prices, thus learning something about the operating costs of a real business firm. These are but a few of the many methods used.

DIANE REINKE and JILL HAINLEN of the *Zanewood Elementary School* in *Brooklyn Park, Minnesota,* teach economic concepts to their second graders through career development in a business enterprise. The students wrote and produced a book which they then sold to parents, friends and educators. A local bank provided a loan to pay for various capital costs. After paying all their expenses and repaying their loan with interest, the pupils had a handsome profit which they donated to the school library. Simulations, group discussions, audiovisual materials, games, field trips, and many other activities were also used to teach such concepts as opportunity cost, money, wants, needs, productive resources, supply, demand, circular flow, division of labor and scarcity. The children learned to perceive themselves as both producers and consumers, and visualized the relationships among consumer, business firm and banking system. They explored the ways in which various workers depend upon one another and identified skills and interests that might lead to particular careers. An economics test was administered on a pretest, posttest basis. The posttest score was nearly double that of the pretest mean score.

MARY M. GROSSMAN of *Taft Elementary School* in *Eastlake, Ohio*, has developed four units for teaching economics and the free enterprise system to her combined second and third-grade class. (The units can be adapted to other levels, however.) These well-organized units start with a series of questions which can help the teacher to find out how much the children already know about the unit topic. (Example: What is a service occupation?) Goals and behavioral objectives are listed, as are the key economic terms contained in the unit. The various activities and the materials (such as filmstrips and films) to be used are listed and described. There are also discussion questions and "enrichment activities" such as drawing pictures of the jobs in which the pupils are interested and identifying the other occupations that depend upon those jobs. Finally, there are review questions and unit tests. Some of the activities are similar to those commonly reported in the Awards Program entries, such as the formation of a business enterprise. One of the unusual activities, however, was having the students interview the mayor of Eastlake. They asked questions about such things as getting more sidewalks and having all the streets plowed during snowstorms. From his answers they could see that available resources are not always sufficient to meet all our wants. Miss Grossman also had the pupils identify local business firms and write to them for further information. Thus, her units made good use of local resources and resource people.

Pupils in Mary Grossman's class at Taft Elementary School in Eastlake, Ohio, learn about the free enterprise system by producing and selling goods. This young entrepreneur is finding that the customer wants to be sure of the quality of the product before making a purchase.



Intense concentration is needed for running a business—especially when you are only seven years old! Pupils of Helen Frederick at the Charbonier Elementary School in Florissant, Missouri, earned a profit by producing and selling Valentines.

DEBORAH FORD of the *Crestwood Elementary School* of *Las Vegas, Nevada,* had her third graders set up a "city" in her classroom. A government was established, a classroom currency was printed, laws were passed (with fines for violating them), and businesses were started. Careful planning went into this project. Before opening their own hamburger stand, for example, the children made trips to hamburger stands in the area to learn how such a business is operated. Other products were manufactured also. All parts of the curriculum were used. For example, mathematics lessons included the determining of prices and the computation of taxes.

BETTY SEAMAN and **DIANE STOUT** of the *Ranchwood Elementary School, Yukon, Oklahoma,* have developed a second-grade project called "Money Makes Money." This included many of the activities normally reported in the Awards entries—visiting community businesses, creating a mural of a city, studying various careers, relating the state's history to economics, establishing classroom business firms, establishing a class bank, and the like. The evaluation scheme was multifaceted, involving anecdotal records, observations of pupil behavior in economic situations, feedback from parents, the making of an audiotape on their learnings, writing creative stories, responding to research questions, and the use of a formal objective test. One of the uncommon practices relating to the evaluation is that these teachers did an item analysis of the test results. That is, they provided "percentage correct" scores for each item on the test instead of aggregate scores. This enabled them to determine which concepts had been mastered completely and which ones were still giving the children some trouble. For example, 100 percent of the class was able to identify the definition of "barter," but only 73 percent knew how to categorize "the money you have in the bank."

CHAPTER TWO

Monkey Business Is Money Business

Fifth Graders Make an Economic Study of a Community Issue

Polly Gray
Washington Intermediate School, Little Rock, Arkansas

Background and Goals

The study described in this report was the outcome of the efforts of young people who are beginning to recognize their responsibilities as participating citizens in a free society. It reflects a two-month period of intense involvement on the part of the 26 youngsters of varying abilities who made up my fifth-grade class. Evenly divided between black and white, the children represented various socioeconomic levels. They had not yet become entangled in the complexities of the role of civic decision-maker, but their idealism was sound, and I felt that at this point in their lives they could develop positive attitudes toward their city and acquire solid understandings of some of the economic problems of urban places.

During the 1975-76 school year my economics unit had centered around the study of the economic development of Little Rock. It had become evident that the children lacked an awareness of many things that affect them, such as the sources of revenue for our city. In the summer of 1976 an article appeared in the newspaper about the possibility of new sources of revenue for Little Rock. One part of this was the question of charging an admission fee at the Little Rock zoo, and I saw in this an opportunity to arouse pupil interest for my 1977 economics unit. The general goals were to acquire an understanding of some basic economic principles and how they affect our daily lives, and to develop the ability to think analytically about economic problems. Some specific goals were as follows:

- To familiarize the students with such economic concepts as scarcity, opportunity cost, comparative advantage, the market system, factors of production, division of labor, money, credit, banking, public expenditure and income, the role of government, and economic growth.
- To provide the students with an experience in doing an in-depth study of the fiscal workings of a public facility.

Note: This is an abbreviated version of a lengthy report. The full report, with supporting materials, can be obtained from the Vernon R. Alden Library, Ohio University, Athens, Ohio—*The Editor*.

- To show that there are divergent views held by various economic, political and social interest groups within our city, and to learn to use objective analysis in deciding which interests shall have priority.
- To help students to recognize their responsibilities as citizens, and to prepare them to make the difficult choices necessary for economic and social growth in the cities.
- To develop skills in public speaking, debate, group participation, leadership, critical thinking, problem solving, interviewing, and objective reporting.

Learning Activities

I chose to have the economics unit take place during the last two months of the school year because a new zoo director was coming to Little Rock and because a vote on the admission fee was expected in June. Thus, the issue would be receiving much public attention and sources of information would be readily available. My enthusiasm for teaching economics is well known locally, and all year long both students and parents had been asking: "What are you going to do in economics this year?" I kept them in suspense by replying: "Just wait until April!" By the time April arrived I had a very attentive group of eager children, and when I introduced the title of our study, "Monkey Business is Money Business," I could see that their curiosity was aroused. I gave them some background on the issue of the admission fee, and it became clear that this was going to be one of the most exciting economics units I had ever taught. Before the day was over we had developed a four-part plan of study. First we would "educate ourselves economically" through a four-week minicourse. Second, we would conduct an in-depth study of the economics of the Little Rock Zoo. Third, we would have an open community debate on the issue of the admission fee, with city officials invited to attend. Finally, we would conduct a mock election for city officials, simulate a meeting of the city board of directors, and then vote on the fee. Each part is briefly described below.

Part One. My students had been exposed to some economics before April, for after having attended an economic education workshop three years ago I found it virtually impossible to avoid including economics in some of my lessons. For example, discussions of the voyages of Columbus included the concept of scarcity and the opportunity cost to the Queen of Columbus' trip. The children had been taught to distinguish between goods and services, and they had been introduced to the problem-solving approach. Nevertheless, they had much more to learn.

Our social studies textbook *United States Studies* (Scott-Foresman) contained some excellent presentations of economic ideas, including charts and graphs associated with those concepts. I would distribute sets of study questions relating to the material in the text, and the children would work in groups to write answers to these questions. Then we would have all-class discussions of each item. Posters were also made to illustrate the concepts, and before long the room was overflowing with the posters. We viewed a variety of filmstrips, such as "Economics in Our World" by *The New York Times*, and "Basic Concepts in Economics" by BFA Educational Media. Division of labor, money, productivity, trade, and wise consumer habits were some of the subjects that were easily related to the everyday activities of the youngsters. We also developed an economics vocabulary chart which was placed in front of our classroom for easy reference. Gradually, economics terms began to appear in the pupils' discussions and they began to identify economic concepts in other areas of learning.

We had several learning centers related to our study. One was a reading table containing our own economics library. This included books borrowed from the school library as well as pamphlets we had collected. The children particularly enjoyed the booklets *The American Economic System . . . and Your Part In It* prepared by the U.S. Department of Commerce (this uses the "Peanuts" cartoon characters) and *The Story of Checks* by the Federal Reserve Bank of New York. Another learning center contained our economics games, some of which were commercially prepared and some of which were prepared by me. In addition to having specific times to play the games, we made them available for students to use whenever they had completed their daily assignments. This was truly a "high interest area." The games were not only fun, they strengthened mathematics skills, taught economic facts about Little Rock, and required decision-making (such as decisions to buy or sell particular industries).

During this phase we decided that each student should have an economic concept booklet of his or her own. The pupils decided to design their booklets in the shape of a monkey, as this would be in accord with the forthcoming study of the zoo. The booklets also provided an on-going evaluation, for I could see that their illustrations of scarcity, opportunity cost, the factors of production, and the like, revealed real understanding. At this time we also read *Life on Paradise Island* by W. H. Wilson and Roman Warmke. This book depicts the process of a very primitive economic system evolving into an advanced economic state. An important concept they learned from this story is that decision-making becomes more complex as a community grows.

As a culminating activity for this "minicourse" in economics we planned a field trip to a bicycle factory. The factory had an excellent assembly line that would enable the students to view division of labor "in action." When our guide pointed out to us that the bicycle chains were not made in the factory but were imported from abroad, one of my students commented: "Comparative advantage!" Back in the classroom the students wrote reports and made illustrations of their learnings. The children were truly becoming "economically aware." We were now ready for Part Two of our plan of study.

Part Two. There was some overlapping of Parts One and Two. The students were well aware of our "coming attraction" and kept bringing in newspaper articles about the zoo. We made a special place for these in the room, posting each one so that it could be read by all. One of our best discussions centered around an article noting that the new zoo director's salary would be higher than that of the former director. The students felt that demand for the director was a factor in raising the salary. These articles also became good sources of information for the debate that would come later. In any event, we felt equipped with enough economic knowledge to make our study of the Little Rock Zoo.

On the first day of this part of our study it became clear that the students were learning to use the analytical approach. They began by suggesting a list of questions that would have to be answered, such as: Who funds the zoo? What is the budget of the Little Rock Zoo? What other sources of income are available to the zoo? What are the present financial needs of the zoo? What are the various opinions regarding the question of charging an admission fee? The next step was to decide how to obtain answers to the questions.

We decided to use the method of interviewing and reporting. City officials, zoo employees, and parents became sources of information. The Director of Little Rock Parks and Recreation provided us with the zoo's budget. The City Manager supplied information on past actions of the City's Board of Directors in regard to the zoo. The local Chamber of Commerce gave us booklets describing our city government. The children made oral reports on their findings. A bulletin board display gave the budget breakdown for the zoo, showing the amounts spent for salaries, food for the animals, buildings, utilities, etc. The pupils began to comprehend the vast amount of decision-making that goes into the preparation of a budget such as this one. They saw that with a limited budget the zoo could increase expenditures for one item (such as purchasing new animals) only by sacrificing some other item. (Opportunity cost principle.)

To answer some of our questions we took a field trip to the zoo. We made it clear to the zoo officials that we did not want the usual sight-seeing tour, but that we wanted to learn about the economics of the zoo. The Zoo's education director made careful preparations for our visit, compiling detailed information on the zoo's finances. She then guided us through an "economic tour" of the zoo, citing the cost of everything from the food for the sealions to the various buildings. We took pictures of some of the facilities, including those that obviously needed to be improved. We learned that the price of an animal was only part of its total cost. Transporting a giraffe, for instance, is especially difficult and expensive. One pupil commented: "I'll never visit a zoo again that I don't think of all the costs involved in this animal business!"

Mrs. Patterson, the education director, explained how a zoo receives financial aid from various sources, such as the Friends of the Zoo and the Civitan Club in Arkansas. But even gifts of animals result in additional expenses for the zoo, because they have to have special cages, food and medical care. After our tour we spent another hour with Mrs. Patterson, asking her additional questions that we had prepared in advance for the trip. Naturally, the admission fee was a major topic of discussion. We learned that the zoo did not even have enough money to have a full-time veterinarian but that zoos help one another by trading and borrowing animals. As we returned to the school our heads were swimming with the vast amounts of knowledge we had accumulated about the economics of the zoo. Some of the students began to prepare their written reports while on the return bus trip, while some debated the admission fee question. All busied themselves with something relating to our study of the zoo. Four girls composed a song about the zoo to the tune of "Mary Had a Little Lamb."

Reports were written about the field trip, with such titles as: "An Economic Look at the Zoo" and "The Zoo through Economic Eyes." The pictures we had taken were put on display under appropriate titles such as: "City Dollars at Work," "Free Admission," or "Dollars Needed for Animal Purchases and Zoo Improvements." We had already learned that there were many different opinions regarding the problems of the zoo, as we had heard these from people we interviewed and had read them in the newspapers. Now it was time for an objective analysis of the issue and for the preparation of our community economic debate.

Part Three. To test my students' readiness for this part of our study, I used an activity recommended in the curriculum guide *Economic Education for Arkansas Elementary Teachers*. This was a problem-solving activity ("Mr. Smith's Problem"), and as I looked over the work of each group I knew they were ready. Most groups had methodically labelled each decision-making step—problem, goals, alternatives, probable consequences, and solution. Now we had to prepare ourselves in the essentials of good debating.

We asked Dr. John Gray, a speech professor from the University of Arkansas, to help us. At his suggestion, the class selected four students to serve on the debate teams. We decided to word our proposition: "Resolved: The Little Rock Zoo Should Charge an Admission Fee." The rest of the class eagerly agreed to help the two debate teams. They would write down all the arguments they could think of on either side and give them to the debaters. All of our economic learnings regarding the zoo really proved to be beneficial now! Dr. Gray visited our classroom for an entire afternoon, helping the debaters prepare their speeches and giving us many helpful hints on the correct order for the debate, the placing of the speakers' stand, etc. A date was established, and the students decided to invite a number of important city officials and officials of the zoo, along with school administrators and the parents of the debaters.

It was also decided that we should share our study with our visitors, so a question and answer period was planned to follow the debate. By now we were all experiencing a real "togetherness," and the preparations seemed to bring out the best in everyone. We received affirmative replies to most of our invitations, and we were very excited about the fact that important people in the community were recognizing our study as being relevant to a current economic problem. Each visitor seemed genuinely eager to hear about the research that our ten-and-eleven-year-old pupils had done on an issue they were concerned about. The news bureau at Little Rock City Hall put out a release to the three major TV stations, a state radio station, and the major state newspaper.

Needless to say, there was an obvious increase in the feeling of anticipation and excitement in the classroom as the day of the debate approached. To greet our guests, we placed a table by the entrance with a large sign saying: "Welcome to our Community Economic Debate." The two students posted at the table made sure that every guest had a program and name tag. There was a "standing room only" audience when the time for the debate arrived. Among the visitors were the mayor, the city manager, the director of parks and recreation, the director of the zoo, the school superintendent, the president of Friends of the Zoo, the economic education supervisor, our debate coach Professor Gray, our principal, the parents of the debate team members, reporters and cameramen from all three TV stations, a reporter from a radio station, and a reporter and photographer from the leading state newspaper.

The students performed like professionals. Furthermore, our economic learnings were revealed in the speeches of the debate team. The team arguing for an admission fee listed the various advantages to having a fee, such as hiring a full-time veterinarian. The other team replied that many people in Arkansas were too poor to pay the fee and that there were other alternatives, such as a millage increase for cities outside of Little Rock to help support the zoo, and a zoo museum tax like that levied by the city of St. Louis. The rebuttal speakers had not rehearsed their presentations, but they showed that they had done careful research by citing practices at such well-known zoos as the one in San Diego. The probable impact of a fee on people of various income levels was noted. Unfortunately, limitations of space prevent me from repeating all the economic arguments that were made, not to mention the value questions that were raised.

After the debate the students asked very intelligent questions of the officials who were present. For example, one pupil wanted to know what had happened when the zoo issue had been voted on in the past. The mayor gave his views on the issue, but told the students that they could write letters to the city directors to set forth their own opinions on the problem. The new zoo director described his experiences at other zoos and what had happened when fees were charged.

Other interesting things happened during this session. One of our students, Patrick Studer, had won $10 (first prize) in a poetry contest sponsored by the Arkansas State Festival of Arts. Patrick wanted to present his $10 to the zoo to add to the fund for purchasing a new giraffe. The mayor and the president of Friends of the Zoo accepted the check and recognized it as the first public donation in the campaign to raise money for a giraffe. Our guests observed all the economics materials in our classroom and engaged in intense discussions with the pupils on a one-to-one basis. The new zoo director held a group of students spellbound by showing them pictures of Snowflake, an albino orangutan, and telling them how the fact that it was one-of-a-kind raised its price to astronomical levels. After looking at the pupils' economic concept booklets, several adults commented that they had not learned those economic terms until they were in high school. And that night, all three TV stations carried us on prime time, the six o'clock evening news! We were on radio at noon the next day, and the leading state newspaper gave us front page coverage.

So ended Part Three of our plan of study. As the reporter for the newspaper had stated, "This was more than just another idle, academic exercise."

Part Four. After the excitement of Part Three I thought that this phase of our study would be an anticlimax, but I was amazed at the enthusiasm of the students when they returned to school the Monday following the debate. Many students wanted to become "city directors," and had prepared speeches in support of their candidacy. Campaigns were conducted, and seven board members and a mayor were chosen. The pupils also decided to hire a city manager. This group of "elected officials" then met to vote on the issue of the zoo admission fee, while the rest of us played the roles of local residents voicing their opinions. There were many heated discussions, and the final vote was 6 to 1 in favor of the fee. (The city manager did not have a vote.) The final act had been accomplished. These students had taken a current economic community problem, studied it in depth by using an analytical approach to problem-solving, and had come up with a decision.

Evaluation

Although evaluation had been going on all during the two months of our study, the best evidence of learning came during and after the debate. The editorials and cartoons that appeared in the newspaper after our debate were indications that we had stimulated community interest in a current city problem. Several city officials later informed me that the Little Rock City Board of Directors had been influenced by our economic study of the zoo fee question.

Formal evaluation was undertaken through the use of the Test of Elementary Economics (TEE) and my own teacher-made examination. The TEE, which is available from the Joint Council on Economic Education, was administered on a pretest and posttest basis. The errors ranged from 17 to 34 on the pretest, but only 4 to 21 on the posttest. (The test has a total of 40 items.) The results of my own examination were also very encouraging.

Another indication of success is that I was asked to share my techniques with teachers attending an economic education workshop at Southeast Missouri State University in June. Also, letters of commendation were received from parents, school administrators and city officials. But the most important values of this economics study were the observable changes in the young people involved. I could see confidence growing in these children as they grasped the basic economic concepts relating to city problems. They had learned to approach problems in a democratic and orderly way. When he left our classroom on the day of the debate the new zoo director, Mr. Rogers, said: "Mrs. Gray, don't ever allow economic studies, such as this one, to become part of the endangered species."

To Market, to Market, to Buy . . .

A Fifth-Grade Economics Program

Billie M. Bryan and Mary Ellen Ellis
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Burlington, North Carolina

Introduction

"To Market, to Market, to Buy . . ." was designed to help our intermediate grade students to understand our country's economic system. We wanted our unit to improve economic literacy and to provide a starting point for the learning of economic principles that would affect the students for a lifetime. We felt that the best way to help our pupils to understand the market system was to simulate the marketplace in our own classroom and have the children play the roles of both consumer and producer.

To set the stage for our study we drew from a local project of great interest to the youngsters. Burlington had just begun to redevelop the downtown area by building a mall. The downtown area had been dying, and it was hoped that the project called Company Shops Mall would provide revitalization. This gave us the opportunity to make our teaching unit relevant to a real-life situation in our city. We, too, would build a mall—in our classroom.

We decided that the best approach to accomplish our goals was to let economics be a thread that would run throughout the entire school year and to give economics greater emphasis in the social science curriculum. In addition, economics would be integrated with other areas of the curriculum whenever possible.

We put up the engine of a train in September and told our students to climb aboard, for we were *training* to become good economists. As we traveled along the tracks of the American free enterprise system during the school year we added new cars, each major economic topic becoming a "car." This not only served as an excellent motivational device, but illustrated the point that one economic concept is related to (or builds upon) another.

Developmental Activities*

Each unit of our economic project will be referred to as a "car," and our description will follow the same format—a list of the major concepts to be taught, followed by the activities used to convey those concepts.

Car No. 1. Economic Systems

Some of the concepts to be taught in this unit were as follows:

- All societies must answer the questions: What shall we produce? How shall we produce? For whom shall we produce?
- Variations in economic systems are accounted for, in part, by differences in cultures, governments and technology.
- In a command system government authorities decide what goods and services to produce, how, and for whom. Most resources are owned or controlled by the state.
- In a market system the consumers decide what to produce through their "dollar votes."
- Every economic system faces the basic fact of scarcity because there are not enough productive resources to satisfy the wants of the people.
- Because scarcity is a basic fact of life, choices must be made.

We introduced this unit by explaining that every nation must try to answer the basic questions: What to produce? How? For whom? Several periods were spent discussing the ways in which the market system answers these questions in our country, and how our system compares with the command economy of the Soviet Union. We stressed the fact that economics concerns itself with making the best possible use of scarce resources to meet unlimited wants. The various institutions of capitalism were discussed, and we wrote a skit entitled "Marty Discovers the Dollar Vote." This little play reinforced the children's knowledge of the market system and of the important role played by consumers. The fact that economists do not always agree became obvious as we followed the Presidential election.

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* This is an abbreviated version. The complete report can be obtained from the Vernon R. Alden Library, Ohio University, Athens, Ohio—*The Editor*.

During a study of the role of economists we spent much time talking about Adam Smith and his philosophy. While we were celebrating our nation's birthday we also took time to celebrate the 200th anniversary of Smith's book *The Wealth of Nations*. To give the class a surprise, we arranged to have a local businessman visit us dressed in an eighteenth century costume. He brought a copy of Smith's book and told the youngsters about Smith's principles of economics. Later, during our Halloween Costume Parade, we had our own "Adam Smith," and a pupil committee prepared its own version of *The Wealth of Nations*. Other economists were discussed throughout the year, and when Milton Friedman won the Nobel Prize our class wrote to congratulate him. It was an exciting time when he wrote back expressing great interest in what we were doing. We then constructed life-size models of Adam Smith and Milton Friedman.

An economics center was set up in the room, containing such things as filmstrips to help in teaching the pupils how the market system works. This was to provide a strong academic foundation for the "acting out" of the market system that was to occur later. We were going to establish our own businesses in our classroom mall, which was named Polly Shops Mall. Our simulated city was named "Parrotsville, A Bigger, Better Birdtown." A mayor and city council were elected. We had now hooked our Parrotsville Express to our Economic Systems Car, and our exciting journey across America's free enterprise system had begun.

Car No. 2. Money and Exchange.

Some of the objectives of this unit were as follows:

- To understand the various functions of money.
- To see the relationship between productive effort and money income.
- To understand how financial institutions act as intermediaries.
- To learn how credit helps to promote economic growth.

Our pupils knew that as consumers they needed money to obtain the things they wanted, but we tried to show them that money itself does not provide satisfaction—it simply serves as a medium of exchange. We traced the history of money and described the various forms that money has taken. The disadvantages of the barter system were discussed. Many films, filmstrips and books were used to teach this subject, and some children brought samples of money from other lands. United States currency and coins were examined, and we noted the advantages of our money—it is portable, divisible, durable, and easily recognized. Much emphasis was placed upon the functions of money; namely, that it serves as a medium of exchange, standard of value, store of value, and standard of deferred payment. We hung a giant dollar bill from the ceiling with the four functions of money listed underneath it. A bulletin board display on the circular flow of economic activity was arranged, showing how money helps to make this flow possible.

Then we explained that our money supply includes checks and credit. A study of how banks work was initiated. The children learned about savings accounts, checking accounts, loans and interest. A bank was established in our classroom, and we took a trip to one of the banks in our community. Later, when the children began to earn money through our classroom economic activities, they would be able to deposit money in the class bank (the "Feather Your Nest National Bank"). The children took turns running the bank, for they had all learned the details of writing checks, making deposits and keeping records. They even prepared monthly bank statements. We stressed the importance of savings and investments to the growth of our economy.

To make our bank as realistic as possible, we let students use "money" from their accounts to buy the right to engage in sporting events or other leisure time activites, and we urged them to deposit money in their savings accounts throughout the year so they would have enough to pay their taxes by April 15! The pupils learned about various kinds of bank loans, how banks earn their income, and how bank loans help to stimulate the economy of our community. There were lessons in how to apply for credit (including the filling out of credit applications) and in how credit affects the national economy. Later, when our classroom entrepreneurs established their businesses several of them had to obtain loans from the class bank.

Car No. 3. Working and Earning.

The concepts in this unit included the following:

- People who make useful things or do useful work are producers.
- Division of labor increases efficiency and output, but makes people interdependent.
- Unemployment is an economic waste and causes human suffering.
- Labor unions play an important role in our economy.

All of our students knew that some members of their families work, but they did not seem to understand why work is so important. Thus, we wanted the boys and girls to understand that for most people the most important thing they have to sell is their own labor. The foundation for this unit was laid through a vocabulary list that included such terms as wage, salary and income. To stimulate student interest, we developed a career education activity called "What will I be, from A to Z?" This helped the children to realize that they would someday join the labor force and that they should begin now to prepare themselves.

It became clear that individual initiative is a vital part of our economic system, and that there are good reasons why all workers do not earn the same income. The students learned the various factors that affect a person's income, such as the kind of occupation he or she pursues and the demand for his or her services. We learned why some industries have higher wage scales than others, and we saw why skill and training are so important. The importance of making the right career choice was stressed.

Our students were now ready to seek employment in our classroom. Each child filled out a job application form in our "personnel office," seeking employment in such things as passing out lunch tickets, distributing supplies, and cleaning sinks. They were given to understand that they could be dismissed if they did not work efficiently and responsibly. Each worker was entitled to a vacation and to five sick days. Play money was used to pay the boys and girls their wages, and they could deposit this in savings or checking accounts. We never told them how much they had to save, but most realized that we were leading up to a big project that would require ready cash of those who wanted to start their own businesses.

We discussed earning an income, budgeting, and using one's income for consumer goods and services. Some time was spent explaining how inflation has eaten away at the buying power of our incomes. One all-class activity was the following of prices of many products in the typical "market basket." We made a chart to show the trend of inflation over a period of several months.

Another problem that the children were aware of was unemployment, for Burlington is a textile community and had been hit hard by the economic slow-down. Many of the boys and girls were directly affected, for their fathers had been dismissed and they knew at first hand about the human suffering that unemployment causes. When the national unemployment rate was 7.9 percent, we terminated the jobs of that percentage of our classroom "employees." We explained that we, as management, had to make cutbacks because of financial difficulties. The emotional response was tremendous—anger, frustration and bitterness! The discussion sessions on this topic focused on the social and economic costs of unemployment, and the children began to empathize very strongly with adult men and women who had lost their jobs. We visited a local trucking company that had just released 600 workers and saw the rows of parked trucks and the empty loading docks. It was a grim and graphic picture. We then went to the local Employment Security Commission to see how this agency helps people who suddenly find themselves out of work.

The subject of inflation came up again, and we wanted to reinforce their knowledge of the effect of this phenomenon. We brought such things as candy, soft drinks, chewing gum and peanuts to the classroom and put a "going" price on these items. The children could also spend their money on movies, skating and other activities. We asked each child to decide how he or she might spend two dollars on these goods and services, but after they had done this we raised the prices. This dramatically illustrated the effect of inflation on their buying power.

The next step was to relate the concept of inflation to the adult world. A "market basket" of cardboard items representing food, shelter, clothing, fuel and medical services was prepared and displayed in the room. The prices of the items in the basket were rising, but the wages of most parents were fixed during that period of time. There was a lively discussion of the effect of inflation on a family's standard of living. In response to a student's question we explained the Consumer Price Index. The causes and possible cures of inflation were discussed, and the children acquired an elementary understanding of demand-pull and cost-push. We also tried to explain how the money supply has an influence and how competition can help to curb inflation. Thus, it was shown that the ride in our "Economics Train" was not always smooth, and that inflation and unemployment are—unfortunately—part of the cargo.

We were learning how professional economists try to help with the problems, and how they often provide guidance. The role that economists play was discussed, and we added two more economists to our collection of cardboard models which we called "Who's Who in Economics." These were Dr. Juanita Kreps and Dr. Andrew Brimmer. Then our train headed for its next stop, "Consumerville."

Car No. 4. We Are All Consumers.

The objectives of this unit were as follows:

- To help the pupils to realize that everyone is a consumer and that the consumer's "dollar votes" help to guide and direct our economic activity.
- To show students that wants are potentially unlimited and that the resources to satisfy those wants *are* limited.
- To see that choices must be made, and that choices are influenced by tastes, beliefs, incomes, and the availability of resources.
- To understand that wants vary because of personal preferences and age differences.

We explained that our "train" was "stopping at Consumerville" because we are all consumers. We viewed several films and filmstrips on the consumer, and our vocabulary list grew to include such terms as impulse buying, budgeting, choice, competition, advertising and opportunity cost. The opportunity cost principle was stressed, for when the consumer chooses one item he or she sacrifices some other item that could be obtained with the same amount of money.

Advertising was a popular subject, and the students chose products and wrote their own "ads" for them. We examined the various methods used in advertising, and how advertising affects consumer behavior. The role of government and of consumer groups who try to protect us from misleading advertising was discussed. Such publications as *Consumer Reports*, *Consumer Bulletin*, and *Changing Times* were studied. Government regulation of utilities and government antimonopoly actions were also considered at this point. We noted, too, that advertising does play an important role in our economy, and we invited representatives from a local radio station and newspaper to visit us and talk about advertising. They provided valuable information for the pupils who would be establishing a classroom advertising agency, newspaper and radio station later on.

Each student selected a product and did a price survey in several stores. The differences in prices were then discussed, with attempts to explain those differences. It was noted that small proprietors charge more than chain stores, and that "convenience stores" charge more also. (Consumers are often willing to pay the additional charge, however.) Comparisons were made of quality as well as prices. We made a study of "The Use and Abuse of Credit," discussed impulse buying, and had the youngsters prepare workable budgets. For the first time many of the children began to acquire realistic notions of what is required to run a household and to appreciate the problems their parents face in trying to stretch their incomes. They saw the importance of having money in savings accounts to cover unexpected expenses, such as repairs or medical bills. We had not planned to teach about insurance, but so many questions arose when we included insurance premiums in our budgets that we had to take one period to talk about various types of insurance.

Finding that impulse buying occurs very often in supermarkets, we had the students make shopping lists categorized in terms of the location of the items in the stores—meats and poultry, dairy products, canned goods, etc. The items could be ranked in order of importance, so that those most necessary would be purchased first. When our pupils later priced the items on the list they were amazed at the cost of groceries, for they had formerly taken for granted that their parents could easily meet their needs. Several stated that they would now be less demanding and stop asking for expensive snack foods.

Car No. 5. Taxes.

The following understandings were to be conveyed through this unit:

- Just as we need money to run our households, the local, state and federal governments need money with which to operate.
- Governments levy taxes in order to provide various services for the people.
- Government's income is limited, and thus government officials must also make choices on what goods and services to provide.
- A certain amount of government control and influence is accepted in our economy for the protection of the people.

In addition to films, filmstrips and materials from our library, we had materials on taxation provided by our local tax office. Each student was given a worksheet on which to list the sources of local, state and federal revenue, and the services provided by each level of government. Each such service was illustrated with pupil art work. We had a "tax tree" in the room, and each drawing was placed on the tree.

One filmstrip showed a taxpayer becoming very angry when the tax on his property was increased. We wondered if the children would react in the same way when they learned that they would be paying taxes too. Our "City Council" called a town meeting which was presided over by our student mayor. The mayor explained that each citizen of Parrotsville would pay both income and sales taxes. The filmstrip had shown why a town has to collect taxes, however, so the class overwhelmingly supported this action. They were less enthused, however, when the time for payment of taxes came, and one pupil had to obtain a loan from the bank to meet his payment. Our local tax office provided sales tax charts for the use of the clasroom merchants when they opened their stores, and our City Council hired a tax collector. Of course, the town of Parrotsville provided a number of services for its citizens. One of the exciting moments for us came when a student commented: "You know, I've been thinking when we break out the windows in schools and stuff like that we're only hurting ourselves because we end up paying for it."

The next stop on our "train" would be the new mall we planned to build.

Car No. 6. To Market, to Market, to Buy . . .

This unit was to be vitally important in teaching our students about the market system. Some specific objectives were as follows:

- To understand how profit acts as an incentive to businesses.
- To learn about the role of the entrepreneur as the organizer of productive resources (land, labor and capital).

- To see that competition is one of the important factors in a capitalist economy.
- To understand and appreciate individual freedom and initiative in the market system.
- To become aware of the rights of ownership of property.
- To understand that businesses may take the forms of proprietorships, partnerships or corporations.
- To understand supply and demand, and how they affect prices.

This was the final stop of the "Parrotsville Express," and we would stay here longer than we had stayed at any other stop. There would be more knowledge to digest, and we would combine all the economic principles we had studied earlier as we traveled across the tracks of America's free enterprise system. We would simulate free enterprise in a shopping mall where our students could organize and run their own businesses.

The classroom mall was designed to parallel the redevelopment of downtown Burlington, which we had been following all year. The students worked in groups to decide what goods to produce for our Polly Shops Mall. Work was divided into a number of specialized tasks, and the pupils could apply for the jobs that interested them. Resource people from the community provided expert guidance in such things as weaving and making pottery. Students were paid in play money by Bryan-Ellis Enterprises, which was owned by the teachers. Wages could be deposited in the class bank. One group made jewelry, wall hangings, pillows and book covers. Another grew plants and made flower pots and macramé hangers. A third produced paintings and made greeting cards. Assembly lines were used where appropriate. When enough had been produced to supply all the stores we closed down our "factory." By this time the pupils knew what is was like to be workers, and we had discussed labor unions with the president of the AFL-CIO in North Carolina.

By March the students had enough money in their accounts to start their own businesses. Among the businesses they considered were a craft shop, newspaper, radio station, construction company, advertising agency, movie theater, game center, florist, record shop, jewelry store, potpourri, and bakery. They had to think about the prospects for profit with each business, and whether it would be organized as a proprietorship, partnership or corporation. Organizational meetings were held, names were chosen, store fronts were designed, and merchandise was purchased. Each firm had to rent space from Polly Shops Realty and hire the construction company to build its store or office. Each firm could interview and hire workers. (Unfortunately, there is too little space to permit a description of each company. See the original report for a detailed account of each firm.)

The students had considerable freedom in running their enterprises. Most chose the partnership form, but there was one corporation and one proprietorship. They learned economic principles through experience. For example, two girls discovered that they could increase their sales by reducing their prices. The operators of the radio station found that their income was not all profit, because they had to pay rental costs for records, equipment, and the use of the control room. Those runnning the theater and game center saw that the consumers intended to satisfy their wants for tangible goods before they would pay for their services, and thus they had to be patient before they started receiving some of the money being spent. Some enterprises required more capital investment than others, and a few feared they would go bankrupt before they could earn enough to cover their initial outlays. The newspaper publisher learned that advertising brings in more revenue than subscriptions. Advertising paid off for a merchant whose goods had not been selling well. In short, the students had to make many of the numerous adjustments that any real-life business must make, and only one firm failed. (The company had gone too heavily into debt, and the partners did not work well together.) It is important to note that the student whose poor work habits and lack of responsibility led to the bankruptcy did not become bitter. Instead, he immediately began to mend his ways.

When the mall closed for good, the entrepreneurs could sell their remaining stock by auction. We were paid a fee to auction the goods and keep the records. Some lessons were learned here also, for several pupils forgot what they had learned about good consumer habits and bid too high. Those who overdrew their checking accounts had to pay the bank a penalty fee for their overdrafts. The Polly Shops Mall had given our students a rare chance to look ahead at what the adult world would bring. Some did well, but others experienced disappointment and frustration. For all of them it was a learning experience that should help to prepare them for the responsibilities of economic citizenship.

Evaluation

Car No. 7 was the evaluation of the program, and this took several forms. One means of evaluation was the administration of a formal written test. We devised a test made up of 20 multiple-choice items (a copy is included in the original report) and administered it to the class. We also administered the same test to a control class that was not receiving economics instruction. The two groups had about the save average I.Q. score, and were from the same socioeconomic background. The students who had been in our economics project achieved significantly higher scores.

Another evaluation technique was our "Economics High I.Q. Bowl," a game in which teams competed to see which could answer the greatest number of economics questions. We used lighted signal boards, buzzers, and other trappings employed by TV game shows. A professor of economics from Elon College served as judge. We even had official score keepers and cheer leaders. Since the winning team nosed out the losers by a very small margin (120 to 110 points), it was evident that all had learned their economics well. Indeed, we gave every student a certificate in recognition of his or her achievement in economics.

Student comments, attitudes and behavior were also taken into account. For example, one typical comment was: "I hope we have economics in the sixth, seventh, eighth and ninth grades." The pupils eagerly discussed the economic costs of vandalism and shoplifting, using their knowledge of economics to analyze these costs. Many established goals for themselves and began to save money for the first time. They also began to give more thought to their future and to plan for their jobs.

Many parents wrote notes or came to visit us to tell us how often their children discussed economics at home. Several volunteered to help with field trips and classroom activities. The response from business people was very positive. For instance, redevelopment officials invited our students to be special guests at the grand opening of Company Shops Mall. Business leaders came to our classroom to observe our program in action.

Finally, the success of our program apparently convinced others to teach economics also. Next year every third, fifth, eighth and twelfth-grade class in the Burlington City Schools will teach economics. We have been involved in many local workshops to share our experiences with other teachers, and we have been invited to a state social studies conference to explain our program. We have served as resource people at an economic education workshop at the University of Georgia. We strongly feel that economic education has an important place in the elementary school, and we think our project has proven that young students can master many of the basic concepts of the free enterprise system.

My School: A Laboratory for Studying Economics

An Eight-Week Unit for Fifth and Sixth Grades

Beverly Perkins
Woods Elementry School, Fort Smith, Arkansas

Introduction

During the 1975-76 school year I taught economics to my pupils but had some difficulty making economic concepts "come alive" for them. My fifth and sixth-grade class included a total of 26 children. They were intelligent and eager to learn, but as the 1976-77 year approached I was still unable to come to grips with an idea for a classroom economics unit that would "turn on" the children. At the beginning of the second semester, however, an idea began to jell in my mind. Why not use the school as a laboratory? We were in a new open-space school. The children were proud of the one-and-a-half-year-old building, and it occurred to me that economics was all around us. But how could I initiate the project?

One morning I listed several economic terms on the chalkboard, such as choices, scarcity, specialization, opportunity cost, interdependence, money and circular flow. "Do these words make any sense to you?" I asked the children. "Yes, that's economics," shouted several of the youngsters who had particpated in an economics project the year before. I then announced that we were going on an "economics hunt."

"What's that?" they asked. I explained that we were going to take a tour of the building and grounds and "hunt" for economics. Upon returning to our teaching station the pupils would be expected to tell me what they had seen that would make good subjects for the study of economics. Our tour began with a quiet march through the open-bay area where we looked at the carpeting, lighting, air conditioning ducts, and the large open spaces. In the cafeteria we saw men delivering food for storage in large refrigerators and freezers. On our way to a large storage room where machines and tools are kept, we saw children purchasing supplies at the school store. Out on the school grounds we discussed playground equipment, the landscaping, and the machines used to build the school and to landscape the grounds.

Back in the classroom the children were excited and eager to ask questions. "Who paid for this building?" "Where did the money come from?" "Who hired the people to build it?" The questions seemed endless, and I assured the pupils that in due course we would find answers. Then I asked, "What did you see that would make good subjects for the teaching of economics?" There was no shortage of answers, as they called out such topics as the school store, the men delivering food, the equipment, etc. I was elated. I had found the spark that would kindle the fire for learning economics.

It was time to formulate the objectives for our unit, and the enthusiastic questions and comments of the students helped to give direction to the course the project was to take. They would learn that economics is a vital part of their school day and that they encounter economics in everything they do in school. They would see that productive resources were used in providing them with a new building, and understand that the school and all that goes on within it are made possible by both private and public enterprise. They would understand taxation, money, capital formation, investment, credit, interdependence, choice-making, and the circular flow, especially as those concepts applied to Woods School.

Developmental Activities

The first phase of our study dealt with the open-space school itself. What productive resources were used in building it? Why was the choice made to build an open-space school? What was the opportunity cost? Were efforts made to save on productive resources? How were productive resources allocated? What is a public enterprise?

We saw a filmstrip on productive resources and made lists of the factors of production (natural resources, human resources and capital resources). Committees were formed to do research on topics dealing with productive resources and how they are used in our society. Charts, posters and bulletin board displays were created. The specific resources used in building the school were illustrated on charts. For example, among the *human resources* were architects, draftsmen, skilled technicians and laborers. *Natural resources* included the land on which the building stands and the raw materials used to make the bricks. All the tools and equipment used in constructing the building were *capital resources*. The class then learned that these resources are brought together by *entrepreneurs*.

We found that money had to be borrowed to build the school, and this afforded an excellent opportunity to teach about scarcity and decision-making. The school district had to decide how to allocate its scarce resources. The film "How Shall We Use Our Resources?" was shown to introduce the concept of scarcity. Incomes are limited, and we cannot have everything we want. Thus, choices must be made among alternative ways of using our limited resources. We invited Wallace Floyd, the Director of Instruction for the Fort Smith Public Schools, to explain how some of the decisions about using resources to build the school had been made. The opportunity cost principle was discussed, and Mr. Floyd explained that the resources we use to satisfy one want cannot be used to satisfy another. For example, the planning committee wanted all-weather air conditioning and carpeting as well as a large materials center, but the architect explained that the cost of providing interior walls for enclosing classrooms would equal the cost of the air conditioning and carpeting. The decision was to eliminate the interior walls and have the all-weather air conditioning and carpeting. The opportunity cost, then, was the interior walls. After discussing this, the children decided that the committee had made a wise choice.

Then we studied how both public and private enterprises were involved in building the school. I showed the filmstrips "Government Goods and Services" and "Business Organizations." Woods School is an example of a public enterprise, and the administrators and teachers were cited as examples of people who work for government and produce goods or services paid for by the taxpayer's money. The children listed the different groups from private enterprise contributing to the construction of Woods School along with the goods or services they provided. We also listed people from the public sector who helped.

Some of the children had no understanding of taxation or how taxes were levied to pay for Woods School. We used several filmstrips to gain an understanding of taxes, such as "How Taxes Work" and "Why We Pay Taxes." An official from the Public Schools Service Center visited us to explain school taxation. He noted that the taxpayers own the schools and pay the salaries of school personnel. He described the property tax, millage, and assessment rates. A pie graph was used to show how much of the Fort Smith School budget goes to Woods School. He also helped the students to see how interdependence and specialization applied to the construction of Woods School. The role of competition in our economy was noted when our speaker explained that competition among contractors helped to keep the cost of construction down. Each contractor hired various specialists (plumbers, bricklayers, carpenters, etc.), so the school created jobs and put money into the local economy. All payments became part of the circular flow. In response to a student's question, he explained the bond issue; and again we saw how competition helped to keep the interest rate down because the school board had taken bids from investment companies.

We planned a role-playing activity which would incorporate all the steps involved in financing and building Woods School. In preparation for this we viewed the filmstrip "Banks and Banking." The pupils learned what banks do and how they were involved in the financing of the school. Some of the children's own savings might have gone into purchasing the bonds. Taxation, capital formation, investment and credit were now beginning to make sense to them. Such filmstrips as "Private Capital," "How We Borrow," and "Credit Buying" were helpful. The role-playing activity included simulated school board meetings, debates on the bond issue, an election on the bond question, the selling of the bonds to an investment company, meetings between a planning committee and an architect, meetings between the school board and contractors, competitive bidding, and the hiring of specialists to build the school. The students also wrote essays and drew pictures to illustrate the relevant concepts.

With the study of the building of the school behind us, we began to look at the daily activities in the school and of the people who provide goods and services to Woods School. The role of the middleman was studied with considerable interest, for "middleman" was a new word to the children. The pupils interviewed truckdrivers, salesmen, the mail carrier and others whose services somehow helped to provide us with our needs and wants in the school. The importance of these people was dramatically shown by a discussion of what would happen if they did not come to the school. (No supplies for classroom use, no meals in the cafeteria, etc.) The filmstrip "Specializing and Exchanging" was shown at this time, helping us to see the relationship between specialization and production. The people we had interviewed were all specialists in their jobs, and by specializing we can produce more goods and services. This provides us with more to choose from, but also leads to interdependence. Consideration was also given to the manufacturers who produce the things we use in the school.

The children were beginning to understand that interdependence and trade create the need for a money system. Barter will not work in an advanced economy like ours. To give the class an idea of the inefficiency of a system without money we had a humorous discussion of the chain of events that would follow if Whirlpool paid their employees with a refrigerator. Some parents worked at Whirlpool, so the youngsters were able to think of problems that would arise in trying to buy groceries and pay bills with a refrigerator as the medium of exchange. I showed the filmstrip "Money and Exchange" and invited a representative of a local bank to come and discuss the forms of money commonly used. He also explained the difference between demand and savings deposits and how banks handle checks. The students later dramatized trading in Woods School in a barter system. There were many humorous incidents, such as the surprise the vendors would get when they delivered goods to Woods School and got some other item instead of money in exchange. We also studied credit as it relates to Woods School.

The market economy was the next major topic, and I showed the filmstrip "Economic Systems." Although Woods School is a public enterprise, we could teach the characteristics of the free enterprise system through a study of the school store. Furthermore, the people delivering goods to the school also represented private enterprise. I wanted the children to learn that in a market economy the consumers have a strong voice in determining what will be produced, and that decisions on "how" and "for whom" are also made privately. The profit motive and private ownership of property were important subjects here. Students interviewed the sales people in the school store to learn why they carried the goods they did. We learned that demand determined the type of goods the store would stock and that competition from other sellers in the area had an effect on the prices the store was charging. The pupils made a poster showing the characteristics of the market economy, such as private ownership of property, the profit motive, and consumer direction. The owner of a school supply company visited us to talk about profit and how it is determined. The impact of a change in consumer demand was shown very vividly when we discussed the recent lay-off of workers in a Fort Smith plant that had been unable to sell all its products.

The next question we tackled was: "What is technology and what does it have to do with the extension of resources in Woods School?" After much discussion we defined technology as "applying the best knowledge we have to the manufacture and production of goods and services." Then we looked at the resources being used in the school (including the human resources such as the principal and the teachers) and asked how these are being extended through the use of technology. I made a diary for one day to show how my resources are extended by the use of machines, such as a projector. Murals and charts were made to show how such things as television, films, cassettes and record players serve as "resource extenders" in the school. The pupils visited the principal's office and noted how the intercommunication system extends the resources of the school's chief administrator. The pupils were also regarded as human resources, and a bulletin board display was arranged to compare a poorly equipped classroom with a room full of modern equipment to show how the latter enhances learning.

In this section I have described only a few of the many activities in which the school was used as a laboratory for learning economics.*

Culminating Activities

The project was brought to a close with an assembly program entitled "Economics on Parade" which was given for the intermediate children in Woods School. My class was divided into five groups, each representing a major area of study, and each being responsible for a five-minute presentation. Group One gave an overview of "The Economics of an Open Space School," dealing with productive resources, scarcity, opportunity cost, public enterprise, and private enterprise as they applied to the building of the school.

Group Two's topic was "Paying for Our School." This group explained millage, the bond issue, investment companies, capital formation, and interdependence. Group Three showed "How Goods and Services are Provided for Woods School." Such concepts as goods, services, medium of exchange, banks, and the role of the middleman were covered. The subject of Group Four's presentation was "The Economics of a School Store," which included such topics as private vs. public enterprise, the profit motive, consumer direction, competition, and the private ownership of property. Group Five dealt with "resource extenders" in a presentation entitled "Making Work Easier and More Efficient." They taught the audience about technology and how it makes teachers, the principal, and even the pupils more productive.

Evaluation

The evaluation techniques used in this unit included a careful check of the children's daily work to see if there was real evidence of progress, the use of the standardized Test of Elementary Economics (available from the

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* A more detailed version of this report can be obtained from the Vernon R. Alden Library, Ohio University, Athens, Ohio.

Joint Council on Economic Education), and a teacher-made test. In addition, several teacher-made tests were given throughout the study, and samples of pupil work at the beginning of the unit were compared with their work at the end of the unit. The quality of their work improved significantly over the period of our study, and their understanding of economics increased dramatically.

The Test of Elementary Economics was administered on a pretest, posttest basis. The median score increased by 15 points! (The maximum possible score on this test is 40 points.) I am convinced, however, that there is no way to evaluate fully and objectively what children learn in a project such as this one. Although it may be subjective in nature, I should like to list the "fallout" that I observed while conducting this economics project.

1. The children become highly motivated because they are using an activity approach in dealing with real-life issues.
2. The students become more creative, as evidenced by their work in music, drama, art, writing and the like.
3. The pupils learn how to do research and acquire the necessary skills to search for information.
4. The students read more widely to find answers to their questions.

In short, I know of no approach that is more effective in teaching basic skills than getting youngsters interested in a good economics study.

Islands

A Learning Sequence in Economic Awareness for Sixth Grade

Charles A. Green
South School, Crystal Lake, Illinois

Introduction

The "Islands" project started as an idea to correlate economic concepts with the "world theme" which is so common in the sixth-grade curriculum. By setting up in the classroom a world that the students could call their own, they would be simulating many important aspects of the real world of which they are part. The plan was to have three islands on an imaginary planet,

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Note: Because of the length and unusual nature of this report, we can include only a summary and overview here. Teachers who wish to replicate the project should obtain the original entry from the Vernon Alden Library, Ohio University, Athens, Ohio.—*The Editors*.

each island being an economic unit. The class would be divided into three groups, each group being responsible for making decisions concerning one island and all its inhabitants. The students would make decisions about business and industry, for example, thus learning basic economic concepts they will need to know when they face life in an increasingly complex world economy.

The goals were to teach them specific economic concepts, to reinforce skills related to other curriculum areas, and to develop personal and social skills. Among the concepts in the first set of goals were that resources are limited in relation to human wants and needs, that capital is used to produce goods, that countries specialize and trade with each other, and that the laws of supply and demand affect prices. The skills to be reinforced in meeting the second set of goals included such skills as working with percentages and metrics, writing and oral expression, reading and making maps, the clarification of values, and skills related to consumer education. The personal and social skills to be developed were to make the child an active member of a small group, cooperate with others, and learn to take an active role in decision-making.

The Learning Experience

After informing the class that they would become decision-makers for three islands and dividing the students into three groups, I provided each group with information packets including basic data and instructions. The periods were about 30 minutes long, but could be varied to meet particular circumstances. The total project would consume about 26 periods. Each group was provided with a permanent meeting place as far away from the other groups as possible.

The first information packet included a description of the planet which indicated its size, the location of the three islands, the amount of land available for farming, the location of the cities, the size of the population, and various topographical features. A map of the planet was placed on the bulletin board. Each group was then to decide on a name for its country, to design a national flag, and to make a map of its island.

The second information packet described each island's resources (capital as well as natural) and gave instructions on record-keeping, the use of money and checks, and other routine matters. The kinds and amounts of each resource were listed (such as iron, oil, coal, corn, manufactures, etc.). Each country was to start with the same amount of money, and with an income tax rate of 10 percent. Incomes varied, of course, but at the beginning each island was collecting the same amount of tax revenues. Each group was to keep a journal recording all transactions, including trade with other islands. Records were to be kept of natural resources, industrial resources, treasury accounts, and trade agreements. Forms were provided for these purposes. Checkbooks were also prepared for student use. The pupils had to decide who would preside at meetings, who would keep each of the journals, and so on. There would be expenditures for such things as education, welfare and transportation. During a follow-up discussion with the class as a whole we reviewed the record-keeping procedures and made sure that everyone understood key terms such as capital, revenues, import, export, budget and specialization. Vocabulary lists were duplicated and distributed.

Now the groups would begin to show differences, as each island began to receive sets of problems. For example, Island No. 1 would lose ten units of livestock as a result of a cattle disease, and five units of trees because of a forest fire. On the other hand, new sources of oil were found, increasing their oil supply by 15 units. Meanwhile, on Island No. 2 there has been an oil spill, decreasing both its oil surplus and supply of fish. But its farmers have had a record harvest, so the supply of corn has risen by 15 units. Island No. 3, on the other hand, was losing corn because of a bad harvest and using up some of its surplus oil because of an unusually cold winter. Its fishing industry was thriving, however, so that its surplus of fish increased by 15 units. The students would have to start doing research to decide how to cope with these changes in their resources and needs. As in real life, the problems did not stop. Problem set number two brought such things as unemployment to Island No. 1, the need for major highway improvements on Island No. 2, and a financial crisis for the schools of Island No. 3. Obviously, these factors were causing shifts in each island's resource base and in the relative advantage that one would have over the others. The third problem set brought shortages in iron to Island No. 1, an increase in livestock but a decrease in fish to Island No. 2, the discovery of new sources of gold in Island No. 3, and other changes that would require numerous adjustments.

A major activity engendered by Information Packet No. 3 was trade negotiations among the three countries. The negotiators were to discuss offers and counter-offers until they could reach agreements, then check back with their constituents at home for approval of those agreements. These negotiations were complicated by new sets of problems, such as a drop in Island No. 1's auto output while that of Island No. 2 was increasing. Furthermore, the three countries were now confronted with the suggestion that they create military establishments, and they would have to decide how much to allocate the various-sized armies, warships, planes and the like.

Sample Problem Set
Problem No. 8
Island No. 2

1. Consumption of oil on your island is increasing. Decrease your oil surplus by 25 units.
2. The use of coal in your country is also increasing. Decrease your surplus by 25 units.
3. Because of rising prices at the retail stores, people have been buying larger quantities of meat and fish and storing them in freezers.
   Decrease fish by 30 units.
   Decrease livestock by 20 units.
4. The growing season has brought much rain and moisture to your whole island.
   A. Increase wheat by 20 units
   B. Increase corn by 20 units
   C. Increase trees by 15 units
   D. Increase water surplus by 30 units

Each had to decide on a military budget. New words were added to the vocabulary list, such as consumer, producer, urban, rural, supply, demand, automation, nuclear, and market.

The problem sets became increasingly complex as time went on. In set number five Island No. 1 develops a new type of camera, discovers a new island that may be rich in oil, and confronts the serious problem of air and water pollution. Similar events occur on Islands 2 and 3. The groups are required to prepare written statements about what they will do about the newly discovered island. Meanwhile, labor problems erupt on Island No. 1, the gold supply dwindles on Island No. 2, and Island No. 3 is suffering from an energy crisis. Information Packet Number 5 requires the students to make environmental impact studies and to engage in urban planning. The city to be planned by each group must accommodate 20,000 people, and include industrial areas, commercial sections, residential areas, parks and recreational facilities. There must be a hospital, three grade schools, a high school, two major highways and a railroad. The pupils must decide where to locate the city and consider the impact on the environment.

The sixth Information Packet concentrates on the problem of what to do with the newly discovered island. Each group is now informed of the proposals made by the other groups, and negotiation sessions are set up for discussion of differences. Meanwhile, the city planning project goes on, changes occur in demand (on Island No. 1 the demand for automobiles rises and the demand for clothing drops, for example), and markets must be found for the newly established industries (such as the camera industry of Island No. 1). Island No. 2 must increase its money supply and Island No. 3 must cope with a decline in the demand for its electrical appliances. Thus, as in real life, the people are faced with both domestic and international problems at the same time, and these problems are interconnected.

Next, the negotiations over what to do with the newly discovered island are intensified. The groups must realize that if they decide to share the new island's resources they must also share in any costs that might be involved. It turns out that the island has oil, iron, gold and timber, but that there will be high developmental and transportation costs. Things are not standing still on the old islands, for again there are sets of problems including such things as droughts, rising prices, and increases in fuel consumption. Technological developments also occur, including possiblities for space exploration, computerization and nuclear power. The students are required to do research to decide what to do about their new problems and new opportunities.

Culmination

Of course, only a few of the activities have been listed above, and the teacher can make this project as long and as complex as time, resources, and the abilities and interests of the pupils permit. One culminating activity is to have each group learn that it is to be replaced by another group. The group then prepares a report for its successors, telling them what they have learned about running their island and what advice they would give the new rulers. This not only summarizes their learnings, but serves as an excellent device to show the teacher what economic concepts they have mastered.

A formal test can also be administered. Such a test can include the writing of definitions for key terms (such as capital and surplus), true-false items, short essay questions ("What happens when demand for a certain product increases?"), and "thought" questions in which the student is asked to evaluate a statement ("I think there is more than enough oil—all we have to do is drill for it.").

A project of this type enables children to experience realistic economic problems by simulating conditions that exist in our world today. It arouses and maintains their interest, reinforces and supports other parts of the curriculum, and challenges them to think.

APPENDIX TO CHAPTER 2

Good Ideas in Brief: Intermediate Level

K. DAVID PORTER of *Belfast Central School* in *Belfast, New York,* has had some interesting experiences with the "Mini-Society" approach to teaching economics. (For details on the use of this technique, see Marilyn Kourilsky, *Beyond Simulation.* Los Angeles: Educational Resource Associates, Inc., 1974.) The classroom becomes a real (not a simulated) society in which the students establish and operate businesses and develop their own economic, social and political systems. Mr. Porter's pupils adopted a currency called "Liberty Bills." They were paid in this currency for various classroom chores, and the "Liberty Bills" became the unit of account and medium of exchange for the businesses that were set up. When Mr. Porter, who originally acted as the government, began to levy taxes there were frantic protests. This, of course, helped the youngsters to understand the "taxation without representation" argument of the American colonists, and some students did attempt to rebel and establish their own government. Eventually, a democratic government was established. Many lessons were "learned the hard way." When one variety store bought out the competing shops, a monopoly was created and prices rose. Those who produced inferior goods soon found that competitors turning out better products lured their customers away. The students learned to have written contracts after one partner in a three-partner business withdrew all the firm's funds from the class bank and kept the money for himself. Because it had been deposited in his name, the other two partners had no legal claim to the money. An insurance company came into being after the students realized that absences because of illness were costing them money. The pupils learned to use actual credit application forms, chattel mortgage forms, and checks supplied by a cooperative local bank. The children learned that nothing is free. They were required to pay consultation fees to the teacher when they needed his advice. As time went on, the fifth and sixth-grade classes also established mini-societies, and these new "countries" began to trade with Mr. Porter's fourth graders. Since each country had a different currency system, the pupils had to learn about exchange rates. They also had to cope with sales taxes, the federal income tax, a state income tax, and FICA. (The fifth and sixth-grade teachers who cooperated by establishing mini-societies in their classes were Sue Feldbauer and Judy Barrett.)

ADELENE NEISLAR of *Ballman Elementary School* in *Fort Smith, Arkansas*, has developed a fourth-grade unit in which the pupils learn economics through the study of the life of a pioneer family. Most of the children watched the TV show "Little House on the Prairie," which served to stimulate their interest in pioneer living. Mrs. Neislar then had her students read the series of books by Laura Ingalls Wilder which tell the story of the author's life in Wisconsin, Kansas, Minnesota, and the Dakotas during the 19th century. Committees were formed to study each of the eight books in the series and to identify the economic concepts illustrated by each. Of course, the class had received some instruction in basic economic subjects, such as scarcity, productive resources, the market economy, the circular flow, interdependence, and trade. While reading the books the students would be expected to try to answer such questions as: "What productive resources did the Ingalls family have available?" "How was the family income earned and spent?" "How did they get things they needed but could not produce?" For a culminating activity the children collected recipes from the books and from old cookbooks found at home. They produced a cookbook of the old time recipes and sold copies, thus earning a small profit after covering all production costs. A standardized test was administered, revealing that the pupils had learned many economic concepts from this innovative project.

GEORGE NICKLE and DORIS MORRIS of the *Lora Little Elementary School* in *Wilmington, Delaware*, established a classroom community called "Tiny Town" for their fifth-grade pupils. This was similar to the "mini-society" developed by Marilyn Kourilsky. (See the item in this section regarding the entry of Mr. K. David Porter.) Some interesting value questions arose as this project emerged. For example, the citizens had to decide whether or not to permit a race track to be built in their town, as some were opposed to gambling. (They voted to permit the track when they found that a local race track was the second highest source of school taxes in the district.) Each citizen received $5 of Tiny Town currency at the beginning, but from then on they had to earn any income they received. The Tiny Town bank required borrowers to put up some sort of collateral and, of course, charged interest on loans. The pupils had to learn to be neat, orderly and responsible. Parents and business people from the community served as valuable resource persons. A bank official visited the school to explain checking accounts and other banking services. When the students had a disagreement over the issue of government controls over business, a local government official visited them to present the government's view about the need for such controls, and a representative of a private firm spoke about how business people feel about government intervention. Then, on the last day of Tiny Town's existence, a group of leading executives from major Delaware industries visited the classroom. (This was arranged by the Center for Economic Education at the University of Delaware. In addition to the six business executives, the citizens of Tiny Town were visited by six faculty members from the University of Delaware, several teachers and school administrators, and a class of elementary education students from the University of Delaware.) The visitors were asked to address all questions to the pupils, not to the teachers. In addition to learning many economic concepts, the students improved their skills in mathematics and oral communication.

SUSAN PILLAR of *Woods Elementary School* in *Fort Smith, Arkansas*, has created an economics unit entitled "Economics in a Nutshell" for fourth graders. Since children usually love peanuts and peanut products, they were naturally interested in a study relating economic concepts to this item. They examined the nutritional value of peanuts and peanut butter to determine whether or not the money spent on these products was providing the best nutrition for the price. A consumer survey was made to find out how many families used peanut butter. The children learned about the capital goods and other resources used in making peanut butter and how the scarcity of these resources affects the price. The work of George Washington Carver in discovering over 300 uses for peanuts was one subject of study. During a visit to a Planter's Peanut factory the pupils observed division of labor and mass production at work. The concept of interdependence was made clear when they saw how workers in the plant depend upon others in the economic community. The economic impact of the Planter's factory on the community was also determined. The role of profits in the industry was studied, as was the competitive situation in the industry, and the way in which the industry is affected by government actions and regulations. Finally, the students formed a corporation to produce and sell peanut plants. A standardized test of economic understanding was administered at the beginning and the end of the project. This showed that significant gains in economic knowledge had been made.

ROBIN WISARD of *Portage Path Elementary School* in *Akron, Ohio*, capitalized on her pupils' interest in toys to teach economic concepts. A "Toy Day" was held in which the fourth graders brought in their favorite toys to display and discuss in terms of how well each toy met criteria for being good buys. The market for toys was studied, and the children learned about the factors that can affect prices for toys, such as increases in supply, the development of substitute products, and newer materials. The impact of demand was noted, and the costs involved in producing toys were identified. The class visited the Akron Art Institute to study an antique toy exhibit, read such articles as Sylvia Porter's "The Art of Buying Super Toys" and Erma Bombeck's "Toys Won't Get a Chance to Gracefully Die of Old Age," made their own toys out of cardboard boxes, held barter sessions in which toys were exchanged, studied advertisements for toys (along with advertising in general), and finally set up a classroom factory to produce toy boats. They also did market research, created "ads," and entered the *Akron Beacon Journal's* "Design an Ad Contest."

MARY E. EDWARDS of *England Elementary School* in *England, Arkansas*, taught many economic concepts to her sixth graders through a study of rice. Rice is a major crop in Arkansas, and England is a farming community economically dependent upon rice, soybeans and cotton. The opportunity cost principle was learned through a study of whether the land in the area should be devoted to rice, soybeans or cotton—an increase in the land devoted to one crop would be at the expense of the output of the other two. Factors affecting the value of farm land were noted, with an emphasis upon the scarcity of the land. The various resources used in producing rice were listed, and the role that government plays was studied. Different forms of business organization were examined, with the Arkansas Rice Growers Co-op serving as an example of a cooperative. There were many other activities, such as the formation of a company to produce and sell a product, a study of the economic issues in the Carter-Ford debates on television, and a visit to a session of the state legislature. One of the high spots of the school year was a personal meeting with Governor David Pryor who was presented with copies of economics materials developed by the students.

GENEVA PARRISH of *Cavanaugh Elementary School* in *Fort Smith, Arkansas*, uses "spontaneous drama" to teach economics to her fourth graders. Each skit is preceded by background study in economics and the use of a filmstrip, guest speaker, book or some other educational resource. After viewing the filmstrip, listening to the speaker, reading the book, or whatever, the children decide how to dramatize what they have learned and what role each person will play. For example, after viewing the filmstrip "Why We Pay Taxes," the pupils might pretend to be a family discussing such things as a local tax increase, services performed by government, and the free enterprise system. The skits can be recorded on tape, written down, and performed again for other groups. A formal evaluation (including the use of standardized tests on a pretest and posttest basis) has shown that the use of the skits is very effective in increasing the economic understanding of the students.

Fifth graders at the Central Elementary School in Idabel, Oklahoma, repay a loan they had obtained from a bank to establish their "Mexicala Corporation." The "Corporation" produced Mexican type crafts and sold them at a flea market. The pupils also bought a pony and sold chances on it. The teachers involved were Nita Dean, Annie Brown, Patsy Goolsby, Louise Ray and Diane Wake.

CHAPTER THREE

Money, Banking and the Federal Reserve System

Robert Reinke
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Background and Setting

The ninth-grade social studies course in the Robbinsdale School District consists of economics. The course, divided into three general sections, examines how people use their scarce resources to satisfy their needs and wants. Basic economic concepts and relationships are developed in Section One. The next section provides the opportunity for students to examine various economic systems under the broad categories of traditional, command and market systems. Special emphasis is placed on the mixed market system of the United States. Section Three focuses on problem areas in the United States and the alternative policies that might be considered to resolve the major economic questions. The initial curriculum was the Minnesota Project Social Studies. While much of the original material has been revised, replaced or discarded, the emphasis on providing each student with the basic knowledge and the basic skills of the economist has remained a fixed part of many junior high school programs.

At Hosterman Junior High School we have shifted emphasis from the discipline-centered type of economics course, however, to a course which focuses on personal economic decision-making and skill development. The more traditional units covering basic economic concepts and economic systems have been condensed to a ten-week introductory unit. The following fourteen weeks are divided into four-to-six-week electives covering economic topics such as inflation, poverty, international trade, the economics of pollution, labor/management relations, money, banking and the Federal Reserve System, and other contemporary topics. During the last fourteen weeks of the academic year, a community planning simulation game, involving every ninth grade student and many disciplinary areas, is used. This culminating activity provides a real world context for all the instruction that takes place during the year.

Introduction

The Money, Banking and the Federal Reserve System unit is the newest elective in the Hosterman Junior High School. It represents an effort to identify the conceptual components of general economics which specifically pertain to money and banking. The curriculum package attempts to stimulate interest in money, banking and the Federal Reserve System as well as provide background knowledge which can be expanded in later courses. The unit is a blending of sound, academic content with a wide variety of teaching strategies. The ultimate goal of the unit is to develop basic literacy about money, banking and the Federal Reserve System.

The unit is designed to utilize a variety of teaching strategies to accomplish its goals and objectives. These strategies range from the most traditional lecture techniques to case-study analysis to short simulation or gaming exercises. No one strategy is over-used and each is designed to stimulate interest and to challenge students to learn the basic concepts included in the unit. The unit was also designed to key into currently available educational resources supplied at no charge from the various Federal Reserve Banks throughout the nation. This tie to an "outside community resource" improves the educational quality of the materials and provides a relevancy component to the unit.

The Need

The unit was developed to meet three essential needs. The first was to communicate to students the basic institutions and roles played by our commercial banking system. Initially, the authors were concerned with the academic presentation of information, essentially factual in nature, but the unit was not well motivating to junior high school students. The pendulum then swung far in the opposite direction, and the authors created a simulation game in which students practiced the personal banking skills they would need as adults (check-writing, budgeting, obtaining loans). While highly motivating, the unit lacked a sound, conceptual framework as to how and why financial institutions operated as they did. This unit represents a blending of the two approaches. The materials in the unit provide the factual information about money, banking and the Federal Reserve System and is supplemental to the banking simulation that was mentioned above.

The second need met by the unit *Money, Banking and the Federal Reserve System* is that it provides a series of activities which can be understood by junior high school students. The relationships among banks, the Federal Reserve System, monetary policy and national economic goals are extremely difficult to present in a conceptually sound, yet understandable, format to junior high students. A review of existing materials found them either too conceptually overloaded for junior high school use or extremely monotonous in application. (Almost all materials were exclusively readings and films.) At the junior high level, educators do not teach one concept or generalization per activity but rather use a series of activities to teach one concept. The authors have therefore taken a topic like the creation of money and developed two to four methodological approaches for instructor application and student use. Each broad topic can be taught through a reading, discussion, worksheet, film, filmstrip, group activity or simulation activity. Educators realize that not all students learn best by any one teaching method. By providing a variety of approaches this unit can maximize the learning of most students.

The third need met by the unit is that it can be motivating to students, exclusive of its use in conjunction with a banking simulation game. A quick review of the activities found in *Money, Banking and the Federal Reserve System* shows that there is a planned variety of teaching approaches. Any teaching strategy which is over-used becomes boring to students; therefore, a planned mix of methods is used. A considerable strength of the unit lies in the simulation activities. Research in simulation activities is inconclusive, but experience has taught the authors that junior high school students learn best through participation in a process. This experience is supported by current research in cognitive developmental learning theory. Therefore, when the unit explains the creation of money, check processing and monetary policy, simulation activities are employed. The use of simulation activities allows the participants to see by experiencing cause-and-effect relationships and the functioning of various monetary roles in the U.S. economy.

In summary, the authors feel that the unit (1) provides needed curriculum materials in an area that has been neglected due to its difficulty of content, (2) presents activities which are conceptually sound and understandable to junior high students, and (3) contains a planned mix of activities that can be motivating to students when presented by competent teachers.

Money, Banking and the Federal Reserve System was developed to meet the educational objectives and needs of ninth-grade students. All content and methodological decisions were based upon reaching this audience. Early in the planning stages of the unit it became apparent that because of the complexity of the topics being discussed, the unit could incorporate many concepts and generalizations. It was therefore necessary to choose only those concepts and generalizations considered basic to an understanding of the processes discussed. The reader will notice that the number of concepts and especially generalizations has been severely limited. Generalizations have also been developed which reflect broad relationships among institutions. It is felt that the memorization of specifics is not as important as the development of basic understandings of how a process works.

The unit's activities also reflect the philosophy that at the ninth-grade level it is best to design many activities to teach one concept or generalization. Difficult concepts and relationships are then slowly developed and reinforced in the student's mind. (With older or more advanced students, the instructor may choose to omit some activities as too repetitive.) The cognitive development of students at the upper junior high level suggests activities that proceed from the concrete to the abstract. The authors realize that many students will have difficulty with the more abstract relationships, but the concrete basics that have been developed, as well as the learning that occurs by listening to other students, makes the unit applicable to a heterogeneous class population.

Because of the vast differences which can occur between classrooms and schools, the unit has been structured to apply to a wide variety of abilities and age levels. The progression of activities through the topics money and banking to Federal Reserve monetary policy allows for placement flexibility. At the junior high level or with students of lesser ability, the instructor could choose to utilize the materials about money and banking—omitting, modifying or reducing the number of activities about the more abstract topic of Federal Reserve monetary policy or national economic goal attainment. With high-ability students or senior high students, instructors may choose to omit or limit the activities about money and proceed directly to activities about banking and monetary policy.

Format and Organization

The unit on money, banking and the Federal Reserve System is a self-contained curriculum package. All key instructional materials are included after each activity description. All teachers trained in social studies or business education should feel comfortable with the materials and strategies. As no one strategy is used exclusively, it means that various classroom environments must be developed by the teacher on a daily basis. These environments are described in detail in every activity description. Activity descriptions include title, type of activity (or activities), probable class time needed, an introduction to the content found in the activity and a complete description of how the activity (or activities) can be administered. It is realized and strongly suggested that teachers adapt, modify, delete or add to any activity better to meet their teaching styles and/or the needs of their students.

The student activities are divided into six topical sections. The sections are:

I. Money
II. Commercial Bank Structure and Services
III. Federal Reserve System Structure
IV. Clearing House
V. How Banks Create Money
VI. Monetary and Fiscal Policy

Each section is introduced with a brief overview of its content, a list of activities found in the section and the economic generalizations that are taught by the activities. Following the introduction are the activity descriptions and complete student materials needed. This organization allows instructors to utilize one or all six sections in any sequence or number desired.

The format also allows instructors to modify the unit as they see fit. For some classrooms the sequence of sections and activities as presented in *Money, Banking and the Federal Reserve System* will proceed as written. If modification is needed or desired, the breakdown of activities into topical sections facilitates the revision or the addition of supplementary activities.

Economics and Values

A Teaching Unit for Eighth-Grade Economics

Margaret G. Thompson
Kimmons Junior High School, Fort Smith, Arkansas

Introduction and Goals

The increased emphasis on values clarification and the fact that I have found many similarities between economics and values prompted me to plan a one-semester course on *Manpower and Economic Education,* tying together the two areas. I had several goals in mind when I prepared the course: at least 85 percent of the class would master the basic economic concepts which were to be included; all students would explore their interests, skills and experiences; each would have activities on the decision-making process that seems to be the center of economics and values clarification; each student would examine and identify his/her value system; and each student would examine career possibilities that would provide both satisfaction and an adequate income for the individual student.

Course Organization

At the outset of the course an opinion survey was administered to all my students. Included in the survey were concepts associated with economics as well as attitudes and stereotypes. Later, at the conclusion of the course, I administered the same survey instrument to determine whether attitudes had changed and understanding of the basic economics concepts had occurred.

The next activity concerned the study of "What is Economics?" I introduced key economic concepts and terminology. As these were discussed and defined, they became part of each student's notebook, and as the course continued, new words were added to this vocabulary, as this activity became an important part of the program. As new words, such as resources, capital, labor, technology, and goods and services were defined, the class was divided into groups of four to five students who were given the responsibility of designing posters illustrating each term.

As the students became more comfortable with the vocabulary, class discussions were initiated to deal with attitudes toward work and toward the American economic system. The idea that habits formed in school are related to the habits of workers was surprising to some students. During this phase of the program, we stressed the importance of accepting responsibility for decisions. It was emphasized that the self-concepts of individuals are reflected in their actions through activities, choices, dress and behavior. Very important at this time, we discussed the advantages of a capitalistic system in allowing the individual to develop his highest capacity—providing that the individual is willing to accept the responsibilities of self-direction.

The circular flow model was next introduced as we discussed the local economy. This was an important aspect of the course since Fort Smith had earlier in its history been the site of a large military base which experienced the ups and downs of an economy dependent upon government decision-making. As the local economy became more diversified, many different types of jobs were created. This part of our study provided a reality and background for understanding the interrelationships among the sectors of the economy as well as the economic decisions that are made by society. Circular flow became more than a model as it was applied to our own local circumstances. As we began to understand the relationships among the resources needed for production and the consumers who buy the goods and services, an apparent change in attitude took place among the students. My students began to see themselves as a very important economic factor. The idea that an individual was an important resource or contributor had never been presented to them before. Each learned that the unique worth of the individual can be added to the total.

Our school is a polling place and school elections are held in early spring. Questions about schools provided the opportunity to analyze the institutions of society and how they are interrelated. The economic institutions, such as private property and free enterprise, were discussed together with social institutions such as public education. The class came to the decision that social institutions can help to mold patterns that become economic institutions.

Our next activity concerned the world of work. As we held discussions on many questions associated with work, the class began to see work in a somewhat different way, and the necessity of choosing carefully became obvious.

We spent the better part of three weeks attempting to identify the various factors that influence and are part of our individual value systems. Our first activity was to plan 48 "perfect" hours, using the motivational question, "If you could do anything you wanted for the next 48 hours, what would you do?" The class became rather surprised that this was so difficult an assignment. In this activity, each student was asked to schedule the entire period in 30-minute intervals. The decisions made by each student reflected attitudes and in part relationships with families and friends.

The next step was to have each student list 20 things he/she liked to do. Some of the students had difficulty listing 20 things. After each had compiled a listing, the activities were placed in order of preference. The students' listings were then compared to a class consensus of criteria. In order to allow each student to focus on the results of these surveys, a series of questions were completed. This exercise was designed to allow the students to examine what they had learned about themselves and to see themselves as social and psychological, as well as physical, beings.

We completed the various activities which were developed to have students analyze themselves with a culminating activity—to create a shield or coat of arms. The shield was drawn and divided into six parts, and a symbol was to be placed in each of the sections, symbolizing answers to six questions, which included: what is your greatest achievement to this point in your life; what is your favorite tradition; draw a symbol which represents yourself; what role do you see yourself playing in this world; what goals and aspirations do you have; and what three words best describe you.

As the class had learned about the world of work and about themselves an individuals, the next activity in the course was in the area of decision-making. We used a film series dealing with the question: "What would you do without . . .?" Among the economic concepts that were related to this segment of the study were scarcity, opportunity cost, choice-making and the production function.

Business organizations and types were studied next. Among the specific activities included in this part of the course were: the organization of a corporation during which stock was sold and products manufactured; the mechanics of finding a job, including the filling out of application forms and obtaining social security cards; and a final project on career education. Each student had to research a specific career in which he or she had interest. Four major areas had to be included in the research, which included post-high school training necessary, salary range, environment and availability.

Evaluation

At the conclusion of the course, the class and I began to check on what we had done. We found that the students had learned a number of basic economic concepts in a variety of ways. Their notebooks served as permanent study guides for definitions and explanations. Small group work had allowed opportunities for creativity through such activities as the design and construction of bulletin boards, mobiles and posters. The small groups had also made crossword puzzles and games and done research. More importantly, the students had learned to work cooperatively and to carry a fair share of the work load.

In the values aspect, students checked their attitudes and interests. The exercise that had been used earlier during the course was administered again. We found that many of the students had changed their self-concepts to more positive positions.

The corporation activity had not only brought out organizational structure but also provided an important dimension through which students were forced to look at responsibility on the job. Every student discovered an interest area in the corporation that seemed to bring out a suitable work interest.

On the academic side, only eight students out of the 77 who participated in the course did not master economic concepts that were related to the course.

In conclusion, the combination of economics as taught in our Manpower and Economic Education program combined with values clarification provides a logical approach. It inculcates the basics of economic education while at the same time gives the student the opportunity to verbalize and strengthen his or her value system.

An Economics Program for Teenage Mentally Handicapped Students

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Lucille Taylor
Hugo Junior High School, Hugo, Oklahoma

Introduction

My teaching responsibility is in the area of Special Education. This past year, I had twelve students whose ages ranged from 13 to 16 years, with I.Q. scores varying from 50 to 75. The students were heterogeneous. One hour was spent each day on the various units that are detailed below, except when the group went to the high school home economics department for basic sewing instructions.

If there is any group of students who really need specific training in the value of money and how to use it wisely, it is the teenage mentally handicapped students. They have the same interests as other teenagers, and when they are given opportunities for active participation and involvement, they appear to learn better and retain more of what they have learned.

Our goal in presenting this program was to provide content and experiences which motivate interest among young people and to vary levels of difficulty in the activities in order to build self-confidence and security by giving each student work that was neither too easy nor too difficult.

The program was developed to offer group instruction during which all could participate and individualized work to help in developing a sense of individual responsibility, self-confidence, self-direction, and mature mental and emotional attitudes. Practical reading activities, spelling and vocabulary, and many practical and essential math skills that were considered necessary to succeed to the best of their abilities as they go out into the adult world to get a job or manage a home were structured into the program.

Activities

At the outset of the program, each student pretended to be renting an apartment and setting up housekeeping. Then each decided what was needed in her individual apartment. They collected newspaper ads that included the variety of items they considered necessary, such as linens, dishes, cooking utensils, food and supplies. Each student prepared a budget and established a household expense record which allowed for rent, utilities, food and supplies. Deposit slips were made out and bank accounts were set up. As the students made purchases, they wrote out checks, kept a check record, and were expected to keep their checking accounts in balance.

The purpose of the expense account activity was to help the students to understand that they must be careful to make certain that their expenses did not exceed their incomes, and that everyone needs to keep records of how their money is being spent. An important lesson that I tried to teach was that money management is essential, and that unless accurate records are kept, and if they should allow their accounts to become overdrawn, there will be serious consequences, such as being judged a bad-credit risk or prosecution.

After apartments were furnished and necessary food and supplies were purchased, the next unit dealt with job-hunting. The students filled out application forms for a job. Among the information that was provided were name and address, birthdate and birthplace, marital status, name of spouse, social security number, telephone number, experiences and references.

To simplify the activity, everyone pretended that she got a job paying $3.00 per hour, eight hours daily, and five days each week. In this activity, the students learned about withheld taxes, social security, and take-home pay. This proved difficult for some students, but others did understand and provided help to those who had difficulty with this concept. In the process of this activity, discussions were held on why we pay income and social security taxes and how tax money is spent.

Another related activity that we used concerned the use of duplicated copies of telephone and utility bills. Through this activity a detailed study of the bills was made during which the students understood the rationale for the bills, the importance of economizing on the use of utilities, including the phone, and promptness in the payment of bills.

Although several additional units and learning activities were included in the program, probably the most successful was the sewing class. This activity continued throughout the year as it created considerable interest, motivation and pride.

We have two sewing machines in our classroom, and all we did to get started was to ask the students what articles of clothing they wanted that were considered too expensive to buy. We then computed the costs of the materials and the patterns that were needed, and found that they could be made in class much cheaper than they could be bought.

We contacted the high school economics teacher and with the help of the commercial sewing class, we made arrangements for the junior high school mentally handicapped students to go to the high school for each girl to be measured. Following several field trips to select materials and patterns, the students studied color and design, general fabric characteristics, and fabric care. We also did some basic sewing to learn to operate the machines.

During all the activities that were provided in the program, which was culminated with a style show with each girl modeling what she had made, we were able to relate many economic concepts. Among these were the costs of production, deficits and surpluses, income and expenditures, and money management. The bookkeeping and accounting activities were exceptionally successful as the students learned and understood the importance of keeping accurate records, paying bills, banking, making wise purchases, and other common home and family economic needs.

Evaluation

A program such as this requires an inordinate amount of time, patience and work for the teacher, but I believe the experiences the students had were immeasurably successful. The various activities improved the image of Special Education in our junior high school system. Behavior and social adjustment improved markedly in the classroom, and other junior high school students saw what we were doing and indicated that they wanted to join us. Many of the regular classroom students asked whether they could be admitted into our classroom.

But most importantly, the students were able to demonstrate their increased ability to use the skills they learned in the class, when without assistance, they planned a surprise birthday party for me in the school cafeteria. Securing the money they needed by mowing lawns, baby-sitting, making cakes and conducting a bake sale, they bought a birthday cake, punch, paper plates, napkins, and a gift. As they did this, they showed that they had become money managers and had really benefited from their classroom experiences.

Restauronomics

A Look at the Economic Factors Involved in Beginning a Small Business

Maxine Green, Luvenia Liggins, James Romano, Mary Jane Turner and Frank Pichichero
Jennings Middle School, Akron, Ohio

Introduction

In the team-teaching concept, particularly at Jennings Middle School, there is a great deal of opportunity for variety and innovation. We, the members of the 7-4 team, take pride in both ideas. Our school consists of seventh and eighth graders, and is organized so that one house or division represents each grade. Teachers are grouped in teams to work with each of the grade levels. The project which we developed was completed in a team-teaching situation which included four disciplines: language arts, social studies, science, and mathematics with 120 seventh-grade students in an inner-city school. Jennings is an integrated school with approximately 24 percent black and 76 percent white students. The students ranged in age at the time of the project from 12 to over 15 years and included 56 girls and 64 boys.

While discussing President Carter's economic policies—current events were being planned as part of our lesson—we realized that it was very difficult for our students to understand a number of basic economic principles that are part of the current news. We decided to do something about this, and as a result embarked on a mission to make our seventh graders and ourselves so involved and enthusiastic about this project to study economics that the learning processes would be both fun and educational.

Goals and Objectives

The basic goal of our six-week unit was to help our 120 seventh-grade students to understand some basic economic concepts by studying factors that are involved in starting one's own business. After a considerable amount of discussion, the team suggested that our project should be related to the local community, and specifically tie the study of economics to a food-related company, since we believed our students would have strong interests in this industry. We finally decided to focus on the study of the economics of restaurants.

For the purposes of this report, we have listed some of the objectives of the project. Among these were: to have students understand the private enterprise system as it operates in the American economy; to increase the students' understanding of basic economic terminology; to understand the roles of land, labor, capital and government in the operation of a business; to have our students perceive the process of organizing and operating a business; and to motivate students to higher achievement in academic subjects because of their interest in this project.

Scope and Sequence

This project, an interdisciplinary one involving four academic fields, was conducted over a period of six weeks. It was planned to use one full-hour academic class per day and a 45-minute activity period when necessary. Because of its nature, the only related material that preceded this unit was a basic introduction to economics.

The main thrust of the project was in the social studies where all basic economic understandings were developed. The essential concepts that were included were presented through reading, discussion, lectures, speakers, games and written reports. In mathematics, the students were introduced to basic stock market activities. The organizational structure of corporations was studied, and as our business was formed, stock was sold. Scale drawing techniques were studied as plans for the restaurant were designed. Cost estimates and capital needed to construct a restaurant led to a better understanding of math concepts and their uses as they were applied to the study of economics.

In science class, students considered various forms of energy and insulation to determine the most economical way to provide for these needs. The economic concepts which were studied included scarcity, the pricing system as a rationing device, and supply and demand. Health regulations and sanitary conditions were also studied. In this class in particular, our students discussed costs and benefits and learned about trade-offs and opportunity costs. The language arts class was used for reading and writing and worksheet activities in economics. Spelling activities included an understanding of economic terms. We also emphasized letter writing, preparation of thank-you notes for our speakers and resource persons, development of menus, development of an employment application, and other writing skill developing activities.

Teaching Techniques

The following lesson plans serve as examples of the team approach presented by the four participating teachers. The uniqueness of this project

Behavioral Objectives	Activities	Resources
Students will be able to understand the purposes of the project. **Students will be able to distinguish the varieties of restaurants available on North Hill.**	*Day 1* Large group session: Students viewed teachers' videotape of project objectives. Students viewed videotape and slide presentation of the various types of restaurant we might develop. Types: (1) cafeteria, (2) fast food, (3) sit down. Sit down was chosen. Question and answer session on project objectives and team responsibilities was held.	Slides, videotapes, student script *See Slides*
Students will learn basic banking functions: **a. types of loans** **b. amount of capital needed for specific types of restaurants**	*Day 7* Total group listened to a presentation on the relationship of a bank to the building of a restaurant. Question and answer session.	Donald France—Loan Department Executive, First National Bank of Akron, First National Loan Booklet, loan papers from First National Bank, microphone, podium. *See folder labeled "All Speakers" and picture poster.*

The full report includes 30 daily lesson plans.

and its strength are illustrated by the interdisciplinary approach and the student-team interaction that was planned.

Evaluation

The culminating activity for the Restauronomics project was a fund-raising project which we called a Pancake Brunch. All the activities for planning were headed and developed by the students. Following an advertising campaign during which the students applied what they had learned in the project, the pancake festival was conducted. About 300 people were served and $235 in profits were earned. The team is planning to use the money for a trip to Washington, D.C., during the spring of 1978.

The evaluations for the project took a variety of forms. There were continual efforts to keep all students up to date on the development of our restaurant. Their understanding of how a variety of committee assignments were correlated to form the business enterprise was enhanced by daily reviews of the economic concepts that were inherent in our various activities. An example of this was the work that students did in the advertising campaign and how a product or service can be identified through logos and slogans.

Tests, quizzes and worksheets measured mastery of the basic economic concepts as well as how all parts of the project were interrelated. One indication of the progress made by our students was brought out by the intelligent questions that were addressed to the speakers and resource persons who were brought into the classroom.

We also administered a test consisting of 35 items that we developed from our basic social studies textbook. We gave the identical test to a control group of seventh graders who had not been involved in our project, and found that those students under our direction who took part in the Restauronomics project achieved significantly higher test scores.

APPENDIX TO CHAPTER 3

Good Ideas in Brief: Junior High School Level

FRANK R. IACONIA, of *George J. West Middle School* in *Providence, Rhode Island*, conceived a project designed to provide a practical learning experience emphasizing the mastery of major concepts in economics. The vehicle for the project was the development of a student-owned and operated concession for the sale of delicacies during school lunch periods and at special after-school functions. The business was legally organized and registered as a corporation, operating under the name of Rainbow Counter, Inc. The business activity was designed to operate concomitantly with the school's established social studies program which does not formally include course-work in economics. Duration of the corporation was 14 weeks, in addition to two weeks devoted to planning and basic explanation. The corporation was certified by the state, it paid a percentage of its profits to the school, stock was sold, and it functioned as a profit-making enterprise. In addition to the economic concepts which were learned during the project, students increased their ability to handle currency, became sensitive to contract arrangements and negotiations, became aware of marketing and promotion, and became alert to cost controls and conservation of resources.

BARBARA D. CONRAD, of *Stone Valley School* in *Alamo, California*, desiring to integrate economics into her World Cultures program prepared a series of activities related to career education. The unit was initiated by providing each student with a leaflet entitled *California Occupation Guide*, which described one job in detail. Following this, each student completed an application form for the job. After the students had learned about their jobs and the salaries that were provided for specific lines of work, they were assigned a variety of activities designed to foster investigative and information seeking skills. Included among these were: studying the lifestyle which matched the job, budgeting "take-home" pay to determine priorities of spending, completing tax forms, finding housing, purchasing insurance, and other expenditures. Since almost all the students who participated in the unit were from higher socioeconomic levels, one of the key objectives of the unit was to develop an understanding of how people of moderate means must learn to live on lower and more realistic levels of income than were experienced by the participating students.

ELIZABETH A. BEIKMANN of *Manhattan Junior High School, Manhattan, Kansas*, developed a project designed to make a comparison of the local economies of two university towns, each having a population of approximately 50,000 people. The project was conducted as part of a ten-week unit included in the ninth-grade civics class. The unit covered general economic concepts, alternative economic systems, issues and problems in the American economy, and various aspects related to consumer economics. After two weeks of study of general economics, a class composed of 28 students was assigned the economics comparison project. As the class studied and prepared materials related to Manhattan's economy, a similar class in Lawrence, Kansas, studied and prepared a report on its local economy. In the process of the project, numerous interviews were conducted and along with various other activities a slide/tape presentation was made. At the conclusion of the project, the class traveled to Lawrence to present their report to junior high school students. Later, a group of Lawrence students presented their slide/tape show to the classes in Manhattan. One day a week was allotted to the project which was planned over a ten-week period. As an outcome of the project, a publication describing the economic, political, social, religious and recreational features of the community of Manhattan was prepared.

CHAPTER FOUR

Economic Benefits Resulting from the Port of Green Bay, Wisconsin—A World Marketplace

Sister Marion Joseph Gerl
St. Joseph Academy, Green Bay, Wisconsin

Introduction

In an address given to the Business and Office Education Division of the American Vocational Association at their 1976 convention in Houston, David Shirey, President of Shirey Company, Greenville, Texas, said:

> Over the past several years students have been displaying a growing interest in our economic system. Possibly the shortage of jobs or the general interest in workings of the business community have been the motivating factors behind this interest and subsequent change in student attitudes.

If there is any truth in remarks like those of Mr. Shirey, a business education teacher has many opportunities to incorporate economics in an interesting way in the classroom, particularly through the study of local businesses, or through an approach which is of interest to many people in a specific area. The Port of Green Bay, Wisconsin, a world marketplace, offered many opportunities for a unique study, also because of the economic benefits which accrue to the people of the area through its port operations.

Our senior high school is one block away from the Fox River which flows north into the bay of Green Bay, and lies about one mile from the port itself. Green Bay is part of Lake Michigan, and connects through the St. Lawrence Seaway with the ocean and foreign lands.

Our school—an all-girl high school—has an enrollment of 625. My three typewriting I classes, heterogeneously grouped, and consisting of a total enrollment of 72 students, are scheduled in a module configuration and meet for two 20-minute mods daily. Students are free to practice typewriting before and after school as well as during four mods available during the school day.

Goals of the Project

To integrate economics in my Typing I classes, I developed several general objectives, which included: to promote interest in economics through the study of a community project; to study the economic benefits which accrue to the Green Bay area through port operations; to learn about alternative economic systems; to study navigation as applied to the port; and to learn how to become involved as voters and active citizens in Brown County.

Among the specific objectives of the project were: to type (and comprehend) in left-bound and top-bound manuscript style three reference materials relating to economics and the Port of Green Bay; to study an economics vocabulary and terminology applicable to manuscript typing; to type tabulations—words with economic connotations and number tabulations (statistical typing); and to do one-, three- and five-minute timed exercises extracted from the reference materials used in the project. Each student who participated in the project was to be rewarded with a Certificate of Achievement upon successful completion.

The reference materials used in the project were: *People, Politics and Productivity: The World Corporation in the 1980's*, by Walter B. Wriston; excerpts from the *1973 Foreign Trade Survey*, made by the League of Women Voters of Green Bay; and excerpts from the *1976 Annual Report of the Brown County Board of Harbor Commissioners*. The reading materials as categorized by the use of the Fry formula were found to be at the lower eleventh-grade level.

To carry out the objectives and goals of this study it was necessary for my students to develop a good background in competing economic systems and to gain a thorough understanding of economic terminology.

Activities

Fifty words having economic connotations were selected from the booklet *People, Politics and Productivity*, and underscored in red. Several students looked up definitions and hyphenation of the words, and all students were held responsible for knowing the definition and meaning. They were assigned to study five to ten of the words daily in order to know them prior to typing them from the printed copy. The words were arranged in the order in which they appeared in the booklet. This enabled the students better to comprehend that which they were typing.

The students had been taught how to type a left-bound manuscript. They were reminded to use the term paper guide while typing and use Ko-rectype for correcting errors, thereby eliminating the need to type a page more than once.

The vocabulary words, properly hyphenated, were also arranged in alphabetical order and typed in tabulation form. Information for this was given at the top of the duplicated sheet, and a copy was provided to each student. All students were given a mimeographed sheet containing the last paragraph of page 13 in the Wriston booklet. This showed the number of words for a one-minute and a three-minute timed writing exercise. One three-minute activity was given without practice and two three-minute exercises were given after a considerable amount of practice. The Gross Speed-Per Cent of Error Method was used for grading.

The second manuscript which consisted of excerpts from the *1973 Foreign Trade Survey* was typed in top-bound form. The first page of the duplicated copies was in rough-draft form. Students had to interpret the various printers' symbols, and this activity served as a review.

Students were asked to compare the last paragraph of the first manuscript with the last paragraph of the second manuscript to note similarities since both articles focused on the significance of international trade, and the global economy. All new vocabulary words were posted on the bulletin board.

The third manuscript consisted of excerpts from the 1971 and 1976 *Annual Reports* of the Port of Green Bay and was typed in top-bound form. Again, as unfamiliar words were encountered they were added to the new words list of the bulletin board. These excerpts from the Port of Green Bay Annual Reports for 1971 and 1976 contained the total tonnage of exports and imports, the dollar value, and many of the economic effects that were evident in the Brown County area. The students typed these data using judgment placing.

Comparative annual tonnage reports for imports and exports for the Port of Green Bay were then prepared. These served as statistical reports and a review in the typing of numbers and for their proper alignment. During this phase of the study attention was called to the fact that the American system of measurement differed from the metric system used by most countries in the world. As part of this activity students converted total tonnage figures (short ton) to the metric tonnage by adding approximately ten percent of the total short tonnage.

As the typing activities continued throughout the project, a number of economic concepts were discussed. For example, the fact was noted that the figures represented in the reports were direct benefits to those who produced the services. The complete benefit to the area economy as a result of port operations amounted to a multiplier of 2.44. The regional multiplier indicated the amount of income or employment generated as a result of each additional dollar of new spending in the community. Through the circular flow model of economic activity, students learned that economic benefits to the community mushroomed as a result of world trade.

An important aspect of the project dealt with comparative economic systems, as the students analyzed the similarities and differences among communist, socialist and capitalist systems. Also included in the study were several concepts relating to world trade which included deficits and balance of trade.

During the course of the project, a number of community resource persons were invited to speak to my three Typing I classes. In gratitude to the speakers, students were asked to compose "thank you" letters at the typewriter. In addition to paying attention to the form of the letter, punctuation, spelling and grammar, the students were asked to incorporate economics in their letters if only to name a few of the economic benefits accruing to the local community because of port operations.

Throughout the project the students were asked to note well that "if they are to prosper in the free enterprise system they must understand how it works, understand how wealth is created, and know where it comes from." And again, "if they are to pass on to future generations all the blessings they enjoy today, they must reassert those basic human values of self-reliance and self-restraint and contribute to the system, not tear it down. They must reaffirm their faith in the free enterprise system and add to it the dedication and commitment necessary."

At the conclusion of the project and in appreciation of the students' cooperation and feedback to me, I prepared Certificates of Achievement for their participation. Each student was presented with one on the last day of school. Perhaps it's something they will never forget.

Evaluation

Getting away from typical exercises and drill that are more or less stereotyped in a typical textbook to something relating to the workings of local community affairs is an effective way of motivating interest in economics.

As I found out from the students' thank you notes and letters, they learned some things about economic concepts, understandings, and terminology that they had not known before or have ever been made aware of as applied to local economic activities. The method of adding new words (most of them economic terms) to the bulletin board and studying and reviewing them in typing activities proved to be very effective. Students watched the bulletin board, and many who were not in my classes asked if they could see it.

Very importantly, the typing skills of the students were refined, especially in their being able to phrase and type mailable letters using complete sentences.

A project emphasizing the free enterprise system can surely make an impression on students in a typing class, and students indicated that they understood how a competitive market oriented economy operated as a result of studying comparable economic systems during the project.

Lastly, the typewriter itself provides tremendous economic benefits. The economic world would be lost without it as a means for fast communication in the global market, be it a letter or the results of the modern computer. This, too, was learned by my 72 students.

Economic Concepts Integrated into Accounting

Using Values in Decision-Making

Marguerite Ross Cowan
Fayetteville High School, Fayetteville, Arkansas

Introduction

After 13 years of teaching Accounting I at Fayetteville High School and after attending a Workshop in Economic Education at the University of

Arkansas in 1976, I was motivated to introduce some economic concepts into my accounting classes. Towards the end of my workshop experience, it occurred to me that the economic concepts I had learned would fit in with many of the accounting principles being taught. At the same time, the concepts would add a new dimension to my teaching and would fill a need.

A survey was made to determine the number of local students who elected to take a course in economics. It was a shocking situation. Out of 124 accounting students, only eight were enrolled in the one-semester course in economics offered. The total class in economics enrolled only 66 students. Because of my belief that every student should know something about the world beyond high school, I committed myself to the task of developing greater interest in economics and the free enterprise system. The project described below is a result of that effort.

Goals

The most essential goal of the project was to integrate economic concepts and values into the accounting curriculum, both to enrich the course and to make it more enjoyable. It was structured in such a way that all academic pressures were removed from the students. No grades were to be given and only reports from selected students were required. The time allocated to the unit was approximately 15 hours (using a class period for each concept). Other goals of the unit were: to develop an understanding of the relevance of accounting and economics, of the relationships between the two, and of how both play important roles in the students' world.

Course Organization

During the first days of the project, the students were administered a pretest, using the Joint Council on Economic Education's Test of Elementary Economics. A Rokeach values inventory was provided to the students to rate and keep for later decision-making. This was followed by a brief description of the values which were to be introduced in our discussions later in the project. It was hoped that by learning to make economic judgments through value decision-making, the students would apply this method to making other important decisions in life.

The outline and table of contents for the course are detailed on page 75. Integration intervals indicate what concepts are to be introduced and where during the first, second and third Accounting Cycles (column 2). The values associated with the economic concepts are listed in column 3 and are indicated through the numerical coding at intervals throughout the course manuscript.

The project manuscript was developed as printed originals to be used as "masters" to make transparencies for use with an overhead projector. The teaching procedure was to use the transparencies as the guide for making classroom presentations.*

Evaluation

Pre- and posttest scores revealed that the students showed significant

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* Included in the original entry are 80 masters and transparencies which were developed and used during the course.

Table of Contents Showing Integration Intervals

Accounting I		Economic Concepts	Values	
First Accounting Cycle 1-11	1-11	Types of Business Organizations/Economic Systems	Economic Pretest and Values Inventory	
			Values of American economic system	No. 1
Service Business (6 wks.)		Problems of Production	Limited Resources	No. 2
		Economic Goals	Problem-solving—Goal Values	No. 3
Second Accounting Cycle 12-19				
Merchandising Business using combination journal, general ledger, subsidiary ledgers	12	Stability—Acct./Bus. cycle	Continuum: Sloppy Sue/Exactness Ed	No. 4
	13	Instability	Values affected by unemployment	No. 5
Banking	14	Money and banking—money creation		
Worksheet, financial statements				
Payroll	18-19	Government taxing	Values related to taxation	No. 6
			Continuum: Sales tax	No. 7
Data Processing (11 wks.)				
Third Accounting Cycle 23-31				
1. Merchandising Bus. using five journals, and subsidiary ledgers	23-24	Monetary and Fiscal Policy	Continuum: Monetary/Fiscal policy	No. 8
2. Merchandising Bus. using cash register, petty cash	25-26	American Economy	Continuum: Saving/Spending	No. 9
			Fact, Concept, Value (FCV)	
			Money/creation/spending	No. 10
3. Merchandising Bus. with sales tax, bad debts, depreciation	27	Demand and Supply	FCV: Scarce Product	No. 11
	28-29	Modification of the market	Continuum: Private/Gov.	No. 12
4. Merchandising Bus. notes and interest, accrued income and expenses (15 wks.)	30	Economic Growth	FCV: Economic Growth	No. 13
			Continuum: Percent growth	No. 14
	31	Problems of Growth	FCV: Probs. of growth	No. 15
Partnerships and Corporations (2 wks.)	32-33	World Economy/Am. Economy	Economic Posttest	

growth in their knowledge of economic concepts as they were integrated into the accounting curriculum. In the pretest 27 percent of the students correctly answered between 29 and 36 questions, out of a possible 40. The results of the posttest indicated that 41 percent of the students fell into this category. Similarly, the number of students who answered from 7 to 24 questions in the pretest (38 percent) dropped to 29 percent in the posttest, indicating that students had advanced to a more successful level of accomplishment.

In the student evaluation, administered through the development of an appropriate questionnaire, 81 percent of the students indicated that the economic dimension in the accounting course was worthwhile. In response to a question concerning knowledge of economic concepts, 94 percent responded positively. Other responses indicated that 97 percent of the students understood better the economic services of business and government, and 74 percent favored the integration of economic concepts and values in future classes in accounting.

Conclusion

While the economics concepts presented in the Accounting 1 classes this year did not result in 100 percent success, the statistics gathered did show that 59 percent of the students increased their scores on the posttest, 10 percent remained the same, and 31 percent regressed.

Adjustments will be made next year; however, what I did this year will remain a guideline, and I definitely feel that all the work that went into the project was worthwhile.

In a philosophy course that I took this year, I was reminded of Karl Marx's philosophy in which he described five historic phases: (1) the primitive communal; (2) slave; (3) feudal; (4) capitalist; and (5) (a prediction of things to come) the socialist and communist phase. These predictions have become a reality in such a large portion of the world that they cannot be ignored. Therefore, both socialism and communism must be understood and analyzed. I feel, too, that free enterprise and democratic government need to be taught to this generation so that our young people are made aware of what their nation and its economic system has to offer, and how they need to work to preserve it for future generations. Educators, business persons, labor leaders and politicians all need to join together to present the values of free enterprise and democracy.

Teaching Analytical Economics to Intellectually Gifted Students in a Math and Science High School

Jacob Irgang
Stuyvesant High School, New York, N.Y.

Introduction

I have been teaching economics at Stuyvesant High School since 1966. The student body, for the most part, is oriented towards math and science, and represents a cross section of races, religions and income groups. It would be safe to say that the majority of the parents of our students hold professional positions and have annual incomes in the $15,000 to $25,000 range. Our students are intellectually gifted. Out of the 2800 enrolled in the school, approximately 50 percent plan to major in one of the branches of math and science at the college level. The others, also college bound, intend entering the fields of business administration, economics and finance, or the humanities.

My teaching load varies from semester to semester and ranges from two to five classes in economics, which is a required course for all our students. The innovative aspect of my program is that I teach a full year's course on college level introductory analytical economics to gifted twelfth-grade high school students in only five months. My approach is a straight-forward lecture-discussion-independent research one. The objective of the course is to stimulate interest in the study of economics as well as to encourage critical thinking about important economic issues which affect the student now as well as in the future.

The analytical approach which I present utilizes various economic models such as statistical analysis, geometric diagrams, algebraic equations, and graphs to explain and clarify basic economic concepts. My primary objective is to give students the analytical tools and understandings they need as they come to grips with the numerous economic problems and issues which confront individuals and society today.

For most of our students high school in the last time they receive formal instruction in economics since it is not a required course in many colleges in the country. Although the analytical approach tends to be highly objective, my experience has proven to me that it is an effective and informative method of teaching students about the complex relationships which exist in a four sector economy. Finally, the approach taken, when combined with practical application, can be used to illustrate the usefulness of economic theory to the real world of micro and macroeconomics. For example, firms make practical use of economic concepts such as supply and demand elasticity, marginal utility with respect to advertising, and cost analysis. On the macroeconomic level, analytical economics clarifies the meaning and use of fiscal and monetary policies. The student can understand clearly why a specific fiscal or monetary action used at one time may be ineffective at another point in time.

Course Organization

I have organized the course into four areas:

I. *General Introduction*. An introduction to basic economic concepts through the study of (a) the nature and method of economics; (b) economic growth through the use of a production possibilities table and curve; (c) concepts such as unemployment, underemployment, productivity, and economic efficiency; (d) the fundamental problem of scarcity; (e) social and political influences concerning attitudes towards economic growth; (f) an overview of the American economy through the circular flow of income; (g) the bare elements of supply and demand.

II. *Microeconomics*. An analysis of individual demand decisions by consumers and individual supply decisions by firms in both perfect and imperfect competition. This unit includes the study of (a) consumer demand and utility; (b) demand and supply elasticity; (c) costs of production; (d) the farm problem; (e) elements of accounting wherein the student is shown how to prepare a balance sheet and income (profit or loss) statement for an individual firm; (f) the role of business in our society.

III. *Macroeconomics*. An analysis of fiscal and monetary policies to further the goal of full employment without inflation. It includes the study of (a) national income and product accounting; (b) consumption, savings, and investment functions; (c) equilibrium level of output for a three-sector economy; (d) the "multiplier" effect; (e) economic stabilization through fiscal policy; (f) money and banking (the role of the commercial banking system and the Federal Reserve in influencing the supply of money in the economy during a given period of time); (g) money and prices; (h) the public debt; (i) business cycles; (j) evaluation of fiscal and monetary policies to promote a "full employment" economy with price stability.

IV. *International Trade and Finance.* An analysis of world trade, currency exchange rates, international balance of payments, international financial institutions, and current problems in international trade and finance.

In addition to the basic high school level textbook, students are assigned readings from some of the leading college textbooks on introductory economics. A variety of supplemental readings include publications of the Federal Reserve banks and several magazines.

Each student is assigned three independent research papers during the term. The first deals with economic growth, the second focuses on a specific topic as it relates to microeconomics, and the final paper is either to be a critique of fiscal and monetary policy, a specific problem in international trade and finance, or an in-depth study of an alternative economic system.

Methodology

As an example of the lecture-discussion approach that I use, the introductory topic "The Nature and Method of Economics" will be used. This topic is the gateway to the course because it serves to introduce the student to the analytical tools used by the economist. It brings out the problems and pitfalls the economist confronts when making predictions about the health of the economy, and is used to emphasize the limitations of economics as a science.

To initiate the topic, I use the question: "Who Needs Economics?" This is intended to bring out two salient points: (1) how economics affects the individual and society directly; and (2) major economic problems which confront the United States and the rest of the world. The heart of the topic pivots on the methodology used by economists in suggesting economic policy and in making predictions when called upon to do so.

As we discuss the methodology used by economists, I present a problem that is often put to the President's Council of Economic Advisors: "Assume you are a member of the CEA. The economy is faced with a rising inflation rate of 6 percent and an increase in the unemployment rate to 8 percent. What problems do you want the government to tackle first? As an economist, what steps might you take to deal with the dual problem of unemployment and inflation?"

In teaching about methodology used by the economist, I introduce the various kinds of models which are used. These include arithmetic and geometric models. In the process students learn their uses and limitations. In addition, since economics makes extensive use of statistics, I introduce a mimeographed example of statistical data used by economists. Through this activity concepts such as arithmetic means, median, mode, and normal and skewed distribution are reviewed.

The major purpose of this unit is to introduce the students to the study of economics; to make them aware of the analytical tools used by economists; and to instruct the students about the fact that economic decisions made by individuals and society are influenced by political and social circumstances. As a result of this, the student is provided with the framework for a study emphasizing economic analysis.

Evaluation

Throughout the course of the term I administer approximately seven full period examinations in class and at least one take-home examination. Examinations are usually given after we have analyzed one or two specific topics. The first examination covers the material on (a) the nature and method of economics; (b) the production-possibility frontier; and (c) the overview of the American economy.

The second examination tests the student's understanding of supply and demand. The third test covers material on consumer demand and utility, and the concept of elasticity of demand and supply. The fourth examination is a test of the costs of production for both a perfectly and imperfectly competitive firm. Examination numer five is one which includes the material on the elements of accounting.

Our final marking period is extremely short; therefore, to save time for classroom instruction I give the students a take-home examination which covers income determination, fiscal and monetary policies.

The classroom examinations consist of 15 to 20 multiple-choice questions and one or two essay questions. The take-home examination includes 20 multiple-choice questions and four essays involving content and problem-solving questions. Occasionally I will give students an extra credit take-home examination on a topic such as international trade and finance.

Examinations notwithstanding, I believe that a teacher must go beyond the written test in the evaluation of a course. It is my view that "real" learning occurs when students gain new insights and perspectives on a subject which everyone thought they knew everything about. Using this point as one of my guidelines, I believe my course in analytical economics to be successful.

The students find the course difficult, but also admit it to be challenging. Measuring insights and perspectives can be difficult. However, I do find that as the course moves along during the term the students' questions become sharply perceptive. There have been a number of occasions when students have literally "pinned" me against the wall with some extremely thoughtful questions. It is also gratifying to me, as well as to the students, that they are able to use economic terminology with increased facility. Furthermore, their written papers show concrete evidences of awareness of economic issues and they tend to evaluate them more critically.

I have learned, through personal visitations and by mail, that many of my former students take the course over again in college and perform very well in it. Some of my students have received up to six college credits for introductory economics and have been allowed to enroll in advanced courses in the subject. There are also some students who have taken the course and who have decided to major either in economics or business administration.

From what I have been told by students and their parents, the course in analytical economics has opened doors for those deeply involved in math and science. The course apparently has given them a new perspective with respect to combining math or science with a career in economics.

Throughout the school the students referred to the course as "Irganomics." This is certainly one indication of the effect the course has had on former students and those currently attending the school.

Finally, I am wholly satisfied in knowing that five classes of students (36 in a class) at the end of a school semester know more about economics than they originally did upon entering the class on the first day. Personally, I am proud of the course I offer in analytical economics. Although it entails hours and hours of work on the part of the student and the teacher, I truly believe that the result is definitely worth the effort. What is even more important is that the students are more than satisfied and gratified with the results of their first experience with analytical economics. I don't think a teacher can ask for anything more than that.

A Self-Contained Mini Economy

A One-Semester High School Course in Economics

James Dennis Geraghty
Northglenn High School, Northglenn, Colorado

Introduction

Northglenn High School, a three-year school with over 2400 students, is located in a blue collar suburb of Denver, Colorado, where the median family income is approximately $14,000 per year. Less than 40 percent of the students are college bound and academic achievement is not necessarily considered paramount to success.

Economics is currently offered as a one-semester elective through the Social Studies Department and is open to all students. Juniors and seniors are encouraged to take the course, but interest has been so marginal that it has been necessary to accept sophomores just to offer one section.

The purpose of the following approach to teaching high school economics was to create a more meaningful, relevant method during which students might experience the real impact of a market-type economy on their own lives. In essence, the course was planned to transform economic theory into reality within a classroom mini-economy. It was hoped that this approach would generate greater interest in the subject of economics and perhaps influence more students to elect economics courses in Northglenn.

Description of the Course

Upon completion of the 1976 fall semester, I encouraged all my students to take a second-semester economics course that was to be focused on the world of reality rather than on economic theory. Twelve students decided to elect the course and with the addition of fifteen new students who had little or no previous knowledge of economics, I developed the approach which is described below.

The class was organized to operate as a self-contained mini-economy for the entire semester, and would have one basic objective—to earn income and to purchase wealth. The "wealth" in the classroom mini-economy was to consist of the grades that each student wished to earn.

Organization

Each student assumed the role of principal wage-earner and head of a typical household of a family of four residing in Northglenn, Colorado. The student was expected to earn a gross income of $270 per week ($14,000 divided by 52 weeks) to "buy" an average grade of "C." All earned income was taxed and Social Security payments were deducted from gross wages following IRS Circular E, Employer's Guide to Taxation. Deductions were determined by using the tables applying to married persons—weekly payroll, four deductions.

Every four weeks, prior to the time for students to purchase scarce grades, a cost of living deduction was made from net income after taxes. The cost of living figures were compiled from U.S. Department of Labor statistics and reflected various forms of taxation, i.e., regressive, progressive and proportional. Standard deductions for housing, food, transportation and utilities were included in the computations. All deductions and computations were predetermined and are described in the unit.

A Gross National Product for the mini-economy was calculated on a monthly basis after the respective values of all grades had been established during the first four-week period.

The magnitude of the GNP played an integral role in determining the value of future grades. For example, if the GNP increased 20 percent, the value of grades was increased by a proportionate amount. As GNP was determined, the students computed per capita income and this figure provided the opportunity to understand their economic status as directly related to their earnings.

Students were "paid" a base wage of $5.00 for attending class (or showing up for work). If the student was absent or late to work more than five minutes, he lost a day's wages.

As the unit progressed, students devised methods for producing goods and services for exchange in the mini-economy market. The laws of supply and demand prevailed, and depending upon these forces as well as the quality of the goods or services produced, each student earned income.

Among the various activities (goods and services) that students produced in order to earn income were the following: give an oral report on an economic issue or problem; provide tutorial services; sell insurance to cover absenteeism and tardiness; create and set up a banking system; etc.

A bank was established by two students. It was empowered to make loans, charging prevailing rates of interest. It established accounts for the students, and created and issued checks. All loans had to be secured through collateral, which most often was the student's future grades. As part of the unit, a welfare system was established and students were given activities relating to the use of taxation monies, deficit spending, and options of voting to allow the government to disperse welfare funds. In virtually every case the students voted not to have tax money spent to support a welfare state.

The limited length of this report does not lend itself to providing details describing the various enterprises that were organized by the students in our classroom mini-economy. In addition to the bank, an insurance company was formed, a stock market was created and several businesses providing classroom services were formed.

Evaluation and Conclusion

In general the experience was well worth the effort, from both the teacher's and student's point of view. As the teacher I had reservations as to whether I could keep student interest alive for one semester by organizing the mini-economy around the single topic of money. As it turned out content became irrelevant as discussions evolved from specific economic problems arising out of classroom experiences. Prepared lesson plans were suddenly not necessary or meaningful. The structure of the class became so fluid that we simply dealt with issues as they arose. There was no sequential progression as one topic led logically to the next. My role as teacher became one of advisor and facilitator of information, as opposed to a lecturer disseminating facts and figures.

At one time or another during the semester the topics of banking, creation of money, inflation, recession, business cycles, taxation, welfare, capitalism vs. socialism, Gross National Product, deficit spending, concentration of wealth, and the role of government in a free enterprise system were discussed, as well as experienced, in a "real" way. By answering their questions as they arose, we spent more time dealing with economic problems that they actually experienced instead of talking about topics in which I might have felt more secure.

As for the students, I believe the classroom experiences benefited them greatly. The students were learning inquisitively, as opposed to being "taught" dogma by the teacher. The problems experienced in the mini-economy generated questions which made it easier to comprehend the problems facing the U.S. economy. The analogy between their economy and that of the U.S. was constantly emphasized. In essence, they were learning by doing.

In addition, with the possible exception of the two students who failed, I felt that all students got involved in the class. Perhaps this was because of the uncertainty of it all. Some felt everything was "unfair." Those students were reminded that capitalism does not promise equality. Some were highly motivated by the profit incentive, trying to become rich so they would not have to work so hard, if at all, during the last four weeks of the semester. Some were satisfied to be wage-earners. Some chose not to make the necessary effort to earn enough income to pass. All attitudes associated with a "real" economy seemed to surface in the mini-economy of the classroom. Most importantly, the grade they achieved was virtually the result of their own efforts. If they didn't achieve the grade they thought they deserved, they had nobody to blame except themselves.

In general, the mini-economy was a practical exercise in a free enterprise system in which the great majority of students were actively and constantly involved. As the teacher I don't think I could have expected more.

APPENDIX TO CHAPTER 4

Good Ideas in Brief: High School Level

ELAYNE FELDMAN of *Fridley Senior High School, Fridley, Minnesota,* developed a three-week unit for twelfth-grade students to supplement the nine weeks course in economics in her school. Entitled "The United States and the World Economy," the unit was designed to provide an understanding of international economics. The unit presents a number of basic understandings, principles and concepts, and relies heavily on student activity. Each activity is designed to promote total student participation and is related to current affairs, including the energy crisis. The principal economic concepts brought out in the unit include specialization, scarcity, absolute and comparative advantage, the balance of payments, and the rationale for international trade. Among the activities emphasized in the unit are simulation exercises, supplemental readings and related discussion questions, import and export transactions, currency conversion problems, and pre- and posttests.

MAXINE M. MILLER of *Northside High School* in *Fort Smith, Arkansas,* developed a multifaceted and interdisciplinary project in her sociology classes through an urban study of Fort Smith. Using a sense of community as the focus for the full semester program, the five major institutions of all communities—family, economics, government, education, and religion—were studied in depth. The project developed out of an urban studies institute that had been attended by four students and the instructor. Throughout the project various techniques of data collecting were utilized by the participants. The complete project is presented in seven scrapbooks, a set of slides and other support materials. While the participating students were heavily involved with the learning process and had a direct responsibility in the curriculum, they also learned a great deal about their own community, and, given their personal values, were able to indicate their ideas on organizing a new society. The students then tested the new society against several fundamental needs, including the ability to produce and distribute goods and services, the maintenance of order and security, sense of purpose, and the socialization of members of the new community.

JOEL FISCHER of the *City-as-School, Brooklyn, New York,* and JAMES KILLORAN of *August Martin High School, Jamaica, New York,* using scarcity as the basic economic problem and the energy crisis as the focus for an instructional unit, developed a unique, classroom-tested, highly motivating series of activities that may be used and duplicated by other teachers. Believing that effective teaching requires a marriage between significant content of subject matter and "process" or methodology, the teachers established several goals, including an understanding of basic economic concepts; hypothesis formation and testing; and an increase in students' involvement in the learning process. To achieve the stated goals the instructors created an innovative series of activities that was integrated into a larger course of study in comparative economic systems. The unit is organized to include the rationale for the project, model lessons on hypothesis building, the "energy" game, debriefing activities, and model follow-up lessons.

HOWARD SCHOBER of *Cranford High School, Cranford, New Jersey*, and his eleventh and twelfth-grade economics students published an economics magazine expressly created for secondary school students. While the primary goal of the project was to help students to apply the basic economics principles learned in class to the immediate environment, the activity was designed to teach the students about the various economic elements involved with the formation and operation of a business enterprise. Among the various activities related to economics which were included in the project were: analysis of demand for the magazine assuming various prices; studies of various forms of business enterprises; attitudinal surveys on student beliefs about the business world; budgeting; and determination of costs of production. Two magazines were published in the course of the year, and as the corporation was liquidated the business committee reported a profit of $35 as a result of a 350 copy sellout in one day.

ELIZABETH H. ALLEBAUGH of *Broadway High School, Broadway, Virginia*, developed a unit on money and banking called "How the Fed Spreads the Bread." The unit was designed to develop an understanding of the commercial banking system, the role of the Federal Reserve System, and how monetary policy is used to approach various economic conditions. In the process of the unit, students developed an understanding of the overall scope of the banking system as it relates to many varied aspects of the local community, the state, the nation and the world. Highlighting the unit was a banking seminar and a field trip to a local bank. The culminating activity in the project was a simulation exercise which involved critical analysis of the economic situation and consequent decisions on how to utilize the three major monetary tools. Phase II of the simulation involved participation of students in various activities designed to indicate how the commercial banking system can create money through the fractional reserve system.

DONALD E. NORDLUND of *Scottsdale High School, Scottsdale, Arizona*, has developed a pilot program called "PROJECT: WORK" designed to implement the state-mandated high school course on the "Essentials and Benefits of the Free Enterprise System" and at the same time to include the Career Education Themes identified by the Arizona State Department of Education. The program was designed to provide students with hands-on experiences as they related economic concepts and principles to practice through the formation of businesses organized to produce goods and services. Students utilized their own capital to form their businesses and earned profits or incurred losses in their enterprises. Taxes and rent were paid to the school's student council for business activities conducted on campus. A total of 279 students participated in the project as they formed 89 separate enterprises. More than $3500 was deposited in the school bookstore which served as the commercial bank for the businesses. At the conclusion of the project all businesses were liquidated, but from the successes enjoyed by several of the students, expression of interest was made on establishing the same businesses in the local community. The entry includes all details for utilizing the project including suggested calendars, bibliographies, course outline and content materials, and necessary forms.

JOSEPH WOLFSON of *Andrew Jackson High School, Queens, New York,* and JACK ZEVIN, *Queens College, New York,* developed a project on income inequality in the United States. The project was part of the Queens College-Andrew Jackson Partnership Program in which the staffs of both institutions share resources, curricula and appropriate materials in a number of subject areas. The major goal of the unit was to foster student understanding of the causes and consequences of economic inequality, exposing them to a variety of viewpoints and alternatives on such issues as the relative distribution of income, taxation of inherited wealth, and the gap between the rich and the poor. Issues and data are presented in a way to encourage the students to develop answers and make decisions based upon their own value positions regarding economic inequality in the United States. Through a variety of exercises, related activities and discussion questions the unit seeks to answer in a reasonable and meaningful way: What does economic inequality mean? Why does economic inequality exist? What does the evidence show are the consequences of inequality? Can or should our people be more equal economically? Socially? How can this be accomplished? Is inequality of wealth and income inevitable or modifiable? Is it morally defensible or an evil?

CARL FLOWERS, JR. of *Northeast High School, Fort Lauderdale, Florida,* has designed a simulation called "Money-Days—An Economics Game" to stimulate peer group interaction through a series of activities related to "buying and selling real estate." The game emphasizes "see and do" rather than a see first and do later activity. Each student is "paid" an amount equal to the grades earned in class (i.e., a grade of 92 = $92.00) and with this money he or she must pay rent, and as the game progresses, buy real estate. The simultation may be related to topics normally found in American History which are somewhat difficult to understand or which provide only marginal interest. The key economic concepts emphasized in the game include money, banking, and credit, inflation, supply and demand, and the role of the Federal Reserve System. Each class involved in the activity has a community bank cashier, a real estate salesperson, a mortgage loan officer, a Federal Reserve Bank employer, a grocer, a welfare agent, a tax assessor, a tax collector, and stock broker. Each has a specific set of rules and functions to perform. Included in the project are appropriate record-keeping procedures, facsimiles of bank forms, information on deeds, and the evaluation instrument that was prepared for the game.

CHAPTER FIVE

The Illinois Model for Curriculum Change

Judith S. Brenneke, Peter R. Senn, and John C. Soper

Illinois Council on Economic Education
DeKalb, Illinois

Overview

For the past three academic years (1974-75 to 1976-77), the Illinois Council on Economic Education—a consortium of university and school educators, business, labor and agricultural leaders throughout Illinois—has conducted an innovative and broadly based curriculum implementation program entitled "The World of Work Economic Education" (WOWEE) project. Since 1974, the WOWEE curriculum has been developed, modified and refined while undergoing classroom implementation in scores of schools across the state of Illinois.

Previously published evaluations[1] have focused on various aspects of the project in the first two years of its operation (1974-76). Here we attempt to stress the third year of the project implementation (1976-77), which embodies a number of refinements suggested by the evaluations of prior years.

Although the WOWEE project primarily focuses on economic education at the secondary school level, we are submitting this application through the IPCF Program for College Entrants because the principal medium for project delivery has been (and continues to be) graduate-credited in-service programs for experienced teachers, conducted through a number of universities affiliated with the Illinois Council. We believe that the major innovative contribution of the Illinois WOWEE project (and of the underlying "Illinois Model for Curriculum Change") lies in its cost-effective mode of program delivery, through the nontraditional uses of university and community resources to achieve continued implementation in the classroom.

Goals of the Illinois WOWEE Project

The primary objective has been to teach about work through the use of a selected set of economic concepts.[2] The 10 concepts (or topical areas) selected to be stressed were:

1. Scarcity
2. Individual choice
3. Opportunity cost
4. Work satisfaction

5. Occupational projections
6. Job discrimination
7. Collective bargaining
8. Unemployment
9. Productivity of labor
10. Cost, supply, and demand

The project also stressed the integration of three related curricular areas: career, consumer, and economic education. The generalized objective of the Illinois WOWEE project is to generate among secondary school students an understanding of, and an appreciation for, the importance of work *per se* in the American economic system. Thus, at an operational level, the project has both cognitive and affective (or attitudinal) objectives focused at the student level.

In addition, we expected (but did not set out to evaluate) cognitive gains in a number of other (noneconomic) disciplinary areas (e.g., U.S. history, sociology, psychology, anthropology, and consumer education). These expectations were due, in large part, to the interdisciplinary nature of the WOWEE curriculum as modified through the Illinois implementation project. However, no specific student performance objectives were established in these related areas. In any event, the project staff felt that substantive gains in student cognition of economics would serve as some form of proxy for (unmeasured) gains in other disciplines which would reap "spillover" benefits from the WOWEE implementation.

Another high-priority goal was the development and refinement of a cost-effective and educationally sound model for curriculum dissemination and classroom implementation. We chose to measure cost-effectiveness in terms of percentage gains in student understanding of economics per dollar of project *real* costs. Thus our cost estimates for the project as a whole include more than just the explicit costs incurred by funding agencies, the Illinois Council, the participating schools, and the universities involved.

We included rough estimates of the opportunity costs of students exposed to the project, their teachers, school administrators, the project staff members, and even those of relatively high priced (but unpaid) community resource people used in the project. The "educational soundness" of the model developed can be assessed by the degree of classroom acceptance which both the project and the curriculum have enjoyed. Many past efforts at curriculum change, in economics as in other disciplines, have failed miserably in this sense, despite the fact that they were "good projects" in a content sense. We felt that any project which failed at the classroom implementation stage (in either the short or long run) must be adjudged "educationally *un*sound." Moreover, the development of such a cost-effective and educationally sound model for curriculum dissemination and implementation should be applicable to a variety of curricula and disciplinary structures. In short, if the model worked with WOWEE, it ought to work with other, unrelated curricula.

WOWEE Project History and Procedures

History

The Illinois WOWEE project is an outgrowth of a curriculum originally developed between 1966 and 1968 by Darcy and Powell at the Ohio University Center for Economic Education entitled, *Manpower Development: Opportunities in American Economic Life*.[3] The original program was designed to bridge the gap between education and work by helping students to understand such themes as the structure and functioning of the U.S. economy; changes brought about by technology; the changing role of work in our society; how market processes, occupational opportunities, and decision-making skills were related; and how the individual could become a better informed consumer, worker and voting citizen when he or she had a basic understanding of our economic system. The original curriculum attempted, through an interdisciplinary base, to cut across and integrate many of the social sciences; for example, by providing an examination of the economic, psychological and sociological implications of career choices.

Although the original Ohio-developed WOWEE curriculum was fundamentally sound in a content sense, it appeared to the Illinois project staff to lack a number of important components which would make it educationally successful upon implementation in the classroom. For one thing, the Ohio WOWEE curriculum lacked an articulated teacher in-service design which would facilitate its implementation. The Illinois project staff *knew* that no new curriculum could succeed in Illinois without an effective (and funded) in-service component. For example, in recent years the Illinois legislature has mandated a host of curriculum programs. However, few if any of these legislative mandates have been backed up with budgetary appropriations to support their dissemination and implementation. The obvious result has been a widespread neglect of, or "paper compliance" with, nearly all of the mandated curricula. Moreover, no funds have been provided for either formative or summative evaluation of the mandated curricula. Hence, the state has no way of gauging the success (or lack thereof) of its mandated programs. Therefore, the staff of the Illinois Council felt that the WOWEE project could only be implemented effectively if substantial teacher-training and evaluation components were built into the project from the start.

Another problem with the original WOWEE curriculum (perhaps even more serious than the lack of teacher training and evaluation components) was inherent in the overall design of the program. That design appeared to require the *addition* of an entirely new course to an already overfilled school curriculum. The Ohio program also appeared to be too grade-specific and thus narrowed the options for implementation across various secondary grade levels. Thus the Illinois Council staff decided to modify the structure of the WOWEE curriculum substantially so that an "infusion" approach could be followed. The infusion approach allows teachers to build smaller instructional modules which can be slipped into existing courses of a wide variety.

By the end of the 1974 summer workshop, the WOWEE program consisted of the base material, *Manpower and Economic Education*, plus a packet of implementation and lesson plan units consisting of over 500 mimeographed pages of activities and implementation strategies. In every subsequent year, these have been further improved and enlarged. Most importantly, the materials were broken down by school district and cross referenced by discipline and grade level. In this way, teachers at different grade levels could implement specific activities in the WOWEE curriculum which were not contingent upon either prior training in the curriculum or a vast knowledge of economics *per se*.

Teachers, instead of tearing up their entire stock of existing courses, lesson plans and classroom activities, are in a position to infuse WOWEE concept and lesson modules into what they are already teaching. This was an invaluable asset of the project, for it presented a method of marginal curriculum change that was nonthreatening to the harried teacher and both meaningful and readily adaptable to local classrooms in a variety of disciplines and grade levels.

A further benefit of the infusion approach (and of the strategy used to implement it) was the development of a strong "ownership interest" on the part of participating teachers. That is, the WOWEE curriculum was not imposed on the teachers "from above," either by inflexible legislative mandate, unsympathetic school administrators, or "outside experts carrying briefcases." Rather, the Illinois WOWEE project stressed teacher development and modification of preexisting base materials, many of which came from the original Ohio program. In this process the teachers developed an "ownership interest" in the WOWEE curriculum: if it succeeds, it is because of *their* efforts; if it fails, it is because *they* allowed it to fail.

Procedures

To effect this infusion approach, the following procedures are followed each year of the project:

1. January and February 1976—Key school districts within the intended focus areas for the next year are contacted.[4] Contact is made with a district representative, usually the assistant superintendent for curriculum level.
2. March 1976—Presentations on the WOWEE project are made to the district's consumer, career, and economics curriculum committees. Interested committee members and other teachers they have contacted, have until May 15 to preregister for the class.
3. March-May 1976—Reminders are sent to all persons who attended the March meeting. These reminders are followed up internally by the original district representative.
4. May 1976—Arrangements for the locations of the workshop are finalized at Northern Illinois University. The participants are to stay on one floor of a local dormitory, the class sessions being held on a lower level of the same building. Plans for an office on the residential floor are made. The office will contain a liquid duplicator, two typewriters and a basic library of materials for use by participants.
5. June 1976—Welcome letters are sent out to the 30 registrants representing nine school districts within the three focus areas. Included in the welcome letters are instructions on registration and housing.
6. June-July 1976—Instructors and guest speakers are finally selected. During this time the Illinois Council on Economic Education (ICEE) staff meets with key business representatives to set up "Action Committees" within the focus districts.
7. July 1976—Copies of the tentative schedule for the summer workshop are sent out to all participants.[5]
8. August 2-13, 1976—An intensive 2-week summer workshop is held. The final Friday is a 1-day seminar to introduce WOWEE and the district infusion plans to a group of administrators and Action Committee members from their districts. This begins the implementation phase of the project.[6]
9. August-September 1976—Key teachers, who attended the intensive 2-week workshop, each recruit five or six teachers from their district to attend the year-long extension course to be held within their districts.

10. September-June 1977—In this phase the participants, now numbering 130 teachers, attend a year-long extension course, offering 3 semester hours of credit, which meets every other week. Assisting with this course are the university instructor, the local key teachers, curriculum consultants, guest speakers, and local Action Committee members. All WOWEE teachers pretest both control and experimental classes in September and posttest these same classes in May.

11. May 1977—WOWEE participants meet to discuss classroom results from the past year. Suggestions are made for changes in procedure for the next year, resulting in six new WOWEE units, allowing a greater expansion of the program and a better articulation between consumer, career, and economic concepts.[7]

(Please note: In January 1977 these same procedures were followed to begin the 1977-78 project.)

Through the intensive summer workshop, the teachers:

1. acquire a background understanding of the basic economic concepts, facts and generalizations needed to understand the world of work;[8]
2. learn a method of constructing individualized classroom activities related to WOWEE for use in their own classrooms; and
3. lay the groundwork for an extended implementation of the WOWEE curriculum in their home districts by many more of their fellow teachers.

The last of these three objectives is perhaps the most important and significant innovation of the WOWEE project as it has been implemented in Illinois. By training a relatively small cadre of dedicated and committed "key teachers" in these intensive, on-campus summer institutes, the Illinois Council has been able to multiply the impact of its efforts and resources by a factor of 5 or 6. The key teachers, when they return to their home districts, immediately begin to recruit sizable numbers of their peers as enrollees in a year-long extension course taught within or very near the home district. The recruiting process is facilitated through prior staff contact and coordination with district superintendents, principals and curriculum specialists. In fact, the "key teachers" are selected by school district administrators to participate in the intensive summer WOWEE institutes largely on the basis of the teachers' ability to work with and lead their peers.

This phase of the WOWEE implementation program is another innovative feature and is also the principal contributor to the high cost effectiveness of the program as a whole. This is the case because the ongoing extension workshops are co-instructed by university faculty members (who are also staff members of the ICEE), by the key teachers who had previously undergone intensive summer training, and by businessmen in the local community. The key teachers and business representatives thus operate as peers of university faculty members. These teachers also perform as resource persons in their home districts, assisting their fellow teachers in the process of WOWEE implementation.

The Illinois WOWEE project has developed a procedure to tap noneducator community resource people in a useful way. As the intensive summer institutes draw near, staff members from the Illinois Council meet with key community representatives from business, labor, agriculture and government in the local area to be serviced during the academic year extension phase. The purpose of these community meetings is to form local

"Action Committees" to assist the local schools in WOWEE implementation. These Action Committees consist of prominent individuals from the community who help to bridge the gap between theoretical economics and the real world of work. The Committee members assist teachers by providing speakers for tightly specified topics;[9] by coordinating and arranging field trips, plant tours and similar activities; by supplying materials and information about the local economic base; and by standing ready to answer the questions of the four or five teachers who are "assigned" to each Action Committee member.[10]

In 1976-77, the project was supported by the Amoco Foundation. Since 1974, over 35 Illinois school districts have participated. In its third year, three separate WOWEE extension programs were conducted during the academic year, one in Joliet, another in Naperville, and a third in Wood River. Each extension workshop was conducted through a different Center for Economic Education: the Joliet course was run by Illinois State University, the Naperville course by Northern Illinois University, and the Wood River course by Southern Illinois University-Edwardsville. Previous year-long WOWEE programs have also been carried out through Bradley University (in Peoria and Pekin), DePaul University (in Chicago), and Western Illinois University (in Macomb, Springfield, and all of McDonough County). Other WOWEE programs have been carried out in Rockford, Crystal Lake, DeKalb, Chicago Ridge, Des Plaines, and Mount Prospect by the N.I.U. Center. The graduate-credited extension courses involved have been stretched over the entire academic year (meeting once every two or three weeks) in order to insure adequate time for quality implementation of the WOWEE project.

A series of 12 to 16 class sessions are typically involved in each extension workshop. A significant feature of these workshops is the participation of local Action Committee members. An exemplary three-hour WOWEE instructional session might run as follows:

1. 30-45 minutes of content instruction by the university instructor and course coordinator.
2. 30 minutes of implementation work by the key teachers. (Each key teacher is joined by four to six "implementing" teachers in the academic year course. Each enrolled teacher earns three semester-hours of graduate credit upon completion of the course.)
3. A 30-45 minute presentation by an Action Committee member, dealing with a topic related to the previous "content" and "methods" instruction.
4. A question-and-answer session, followed by independent work by teachers on classroom activity development. (In this phase, small groups are formed by school district or by grade level to facilitate the development of rational implementation plans.)

A most rewarding aspect of the project is the ability of educators to work in groups of four or five with local community representatives. Here provocative and penetrating questions revolving around those issues most asked of teachers by their students are discussed candidly with Action Committee members. As assignments between fortnightly sessions the teachers are expected to create further lesson plans reflecting the new information gathered during the session with the Action Committee members. These preliminary lesson plans are then reviewed by peer teachers, university instructors, and Action Committee members in order to make certain they are correct in content and truly reflect the economics of the area.

Reviewed and completed lesson plans are then duplicated and placed in a community lesson plan WOWEE packet. The packet is divided by WOWEE content area and grade level. Each lesson plan contains separate suggestions for community resource use, i.e., field trips, speakers, audio and media materials and simulations.[11]

Resource Persons, References and Teaching Materials

In addition to the applicants, a number of economists and educators served as resource persons (i.e., instructors, curriculum specialists, and visiting lecturers) during the intensive summer institute which began the 1976-77 WOWEE project.

A number of community leaders (including local Action Committee members) were also called upon to make brief presentations on specific topics.

During the 1976 summer institute and the 1976-77 academic-year extension courses, the following basic text materials were used:

Paul T. Heyne, *The Economic Way of Thinking* (SRA, 1973).

Robert L. Darcy and Phillip E. Powell, *Manpower and Economic Education: A Personal and Social Approach to Career Education* (Love Publishing Co., 1973).

Wingspread Workbook for Education Change Agents (Social Science Education Consortium, 1975).

S. Stowell Symmes, editor, *Handbook for Curriculum Change/ Guidelines* (Joint Council on Economic Education, 1969).

W. Lee Hansen *et al., The Master Curriculum Guide Framework,* Part I (Review Edition; Joint Council on Economic Education, June 1976).

Other materials referenced are too numerous to list. The libraries at both Northern Illinois University and the Illinois Council on Economic Education were used as needed, and all materials on the Joint Council's *Checklist* were available and used as appropriate. Several films, games and simulations, and even interactive computer-assisted instruction algorithms were employed as teaching aids. The instructional procedures used for the participating teachers were the same as those the teachers were expected to use for their own students.

On the other hand, there was relatively little formal instruction in teaching methods. The strategy of the project staff was to use a wide variety of sound educational methods, make the participating teachers aware of this use and, by example, convince the teachers of the usefulness of these methods in their classrooms.

Project Evaluation

During the 1976 summer institute, the first norming edition of the new Test of Economic Literacy (TEL) (Joint Council on Economic Education, 1978) was used as a pretest (form A) and posttest (form B) to generate evidence of *teacher* learning. The performance data for the WOWEE teachers were as follows:

	Pretest	Posttest	Change
Mean scores	36.25	40.00	+ 3.75
Standard deviation	5.69	3.53	
Percentage correct	78.80	86.96	+ 8.16
Range	23-46	33-45	
Number tested	28	27	
Forms used	A	B	

The average percentage gain (measured by Post-Pre/Pre) was 10.34 percent, a substantial gain considering the shortness of the time between pre- and posttesting (8 actual workshop days).

A more meaningful measure of teacher improvement, however, is their so-called "Gap-Closing Score." This score divides their actual improvement (Post-Pre = 40.0 − 36.25 = 3.75) by the amount of potential improvement (Maximum possible score − Pre = 46.0 − 36.25 = 9.75 points). On this basis, the WOWEE teachers, on the average, closed 38.46 percent of the gap in their economic knowledge (as measured by the test instruments) in just eight (8) days of workshop time.

Another index of improvement can be found in the number of test questions (out of 46 on each form) which *all* teachers answered correctly. On the pretest, 100 percent of the teachers answered only three (3) questions correctly. However, on the posttest, thirteen (13) questions were answered correctly by all teachers.

Also noteworthy is the fact that the four teachers who scored *lowest* on the pretest achieved the *largest gains* (35.5 to 50 percent improvements) on the posttest.

During the academic year extension workshops, we switched to the "Hybrid" Test of Understanding in College Economics (TUCE) as a pre- and posttest to gauge teacher learning. One reason for doing so was to retest the summer "key teachers" with an independent instrument of known reliability (partly to check on the reliability of the new TEL). Use of the TUCE also allowed the measurement of differential gains in knowledge of economic concepts between teachers who had and those who had not participated in the intensive summer institute. The evidence here revealed that:

1. There was a strong positive correlation between TEL posttest scores (at the end of the summer institute) and the "hybrid" TUCE pretest scores (at the outset of the fall 1976 academic year extension program) for the 26 "key teachers" having matched scores. (The Spearman $\rho = 0.83$.)
2. The summer-trained "key teachers" entered the fall extension course phase with significantly higher pre-TUCE scores when compared to the "implementing teachers" who were to be trained only in the academic-year extension phase.
3. Both "key" and "implementing" teachers achieved significantly positive gain scores between pre-TUCE and post-TUCE administrations. The "key teachers" retained their absolute advantage over the "implementing teachers," although the gap between the two groups narrowed somewhat.

In our view, however, the most significant test of the effectiveness of a teacher-training program is what happenes to *student* learning after the teachers have returned to the classroom. The most important aspect of any economic education program is not what teachers learn, but what their students learn. Hence, the WOWEE project involved an extensive student testing program as a part of the total teacher-training program.

For evidence of what the teachers taught their students, both a cognitive and an affective instrument were used. We relied on the *Junior High School Test of Economics (JHSTE)* (Joint Council on Economic Education, 1974), a nationally normed, validated instrument designed for testing content acquisition at grade levels 7 through 9.

The affective instrument used was an extensively modified version of "Were I a Worker . . .," an unpublished 120-item instrument, originally developed by M. F. Smith, Project FAIS (Fusion of Applied and Intellectual Skills), P. K. Yonge Laboratory School, University of Florida, Gainesville, 1971.[12] The original instrument was field-tested by Project FAIS and also used by the Manpower and Industrial Relations Institute at North Texas State University.[13] Our 1976-77 version of the instrument had been previously modified for WOWEE project use during the second year of implementation (1975-76). Both the original and the modified instruments rely on the Osgood semantic differential technique to measure affective changes.[14]

The empirical results for the 1976-77 WOWEE project have not as yet been generated, as a number of student groups did not complete the posttesting sequence until June of 1977. A lengthy series of data-reduction and consistency-checking procedures must be completed before regression estimates can be produced.[15] However, we *do* have completed evaluations for both the 1974-75 and 1975-76 samples, yielding matched sample sizes of 1,010 and 1,833 students, respectively. Tables 1 and 2 display these results and we have no reason to expect significant deviations from these results for the 1976-77 sample (which should produce another 1,500 or so observations).

The empirical estimates for the first two years of WOWEE implementation in Illinois are based on a single-equation model where cognitive postscores are determined by cognitive prescores, a new "affective change" variable (measured by a coefficient-of-variation analog),[16] a control-experimental dichotomous variable, a student sex variable, a teacher sex variable, a sex interaction variable,[17] and a set of school district dummy variables. OLS regression analysis was employed to test the model and to estimate coefficients for the explanatory variables chosen to predict student postscores on the cognitive instrument.

These regression results show (for both the 1974-75 and 1975-76 implementations) that the students' prior knowledge of economics (as measured by the cognitive prescore—a "human capital" variable) was the single most important determinant of the students' cognitive postscore.[18]

The second most important and significant determinant of student postscores was exposure to the WOWEE program. The "Conex" variable shows this by taking on a significantly negative coefficient whenever the variable is equal to unity (for "control" groups). "Experimental" (or WOWEE) classes were coded zero. Our measure of affective change enters into the equation as the third most important element, with a large, positive coefficient. It suggests that students making large changes in a "positive"

Table 1

Regression Estimates of Student Cognitive Achievement: 1974-75 WOWEE Sample

(Dependent variable = Posttest score; $N = 1010$)

Variable	Regression Coefficient	Beta Coefficient	t-ratio
Pretest score	0.757	0.655	26.44**
Conex ($c = 1$, $x = 0$)	−2.175	−0.142	6.15**
Affect score	5.178	0.055	2.54*
Sex_t (same = 1)	−0.635	−0.044	1.85
Sex_s ($M = 1$, $F = 0$)	−0.145	−0.010	0.42
Sex_t ($M = 1$, $F = 0$)	−0.031	−0.002	0.07
D_1	−0.043	−0.001	0.05
D_2	0.578	0.012	0.47
D_3	2.706	0.124	4.13**
D_4	−0.092	−0.004	0.13
D_5	2.909	0.145	4.84**
D_6	4.198	0.131	4.73**
D_7	−2.345	0.061	2.46*
D_8	1.424	0.065	2.23*
D_9	−0.413	−0.008	0.34
D_{10}	1.407	0.078	2.41*
Constant	6.723		43.78**

$\bar{R}^2 = 0.5342$ S.E.E. $= 4.88$ $F = 73.32$ (d.f. 993 and 16)**

* significant at the 0.05 level.
** significant at the 0.01 level.

direction on the affective instrument scored higher on the cognitive posttest, *ceteris paribus*.

Also of note is the fact that student sex, teacher sex, and the correspondence of teacher and student sex were *not* significant determinants of cognitive learning in economics *via* the WOWEE curriculum. This indicates that the curriculum is relatively free of sex-role stereotyping, and is also consistent with the hypothesis that WOWEE teaching materials and strategies were free of sex bias.

Among the school district dummy variables (generally indicating different school districts in each of the two implementations), several were significant determinants of student cognitive achievement. To a large extent, these dummies are measuring teacher quality and community socioeconomic status. However, they are also picking up the influence of grade level (a proxy for "student maturity"—another human capital variable) in the 1974-75 regression results. A grade level variable was added to the 1975-76 evaluation design, but it does not enter the equation in Table 2 with statistical significance.

Despite a number of shortcomings (some of which we hope will be corrected in the 1976-77 design), the model used explains well over half of the variance in student cognitive postscores for the first two years of project implementation. Moreover, it provides adequate insights into a number of the underlying determinants of student achievement in this domain. The equations as wholes are both highly significant, as measured by the *f*-statistics.

Thus far, the discussion has concentrated on the educational benefits of the WOWEE curriculum, but no evaluation should be considered complete without some reference to the inevitable costs associated with it. One might be tempted to measure these costs by simply adding up the funding provided by foundations and by participating school districts. But such figures grossly understate the real costs of major curriculum efforts as they leave out the opportunity costs of participating students, teachers, school administrators, and even over-zealous project staff members and community Action Committee members (though the latter costs may be charged to "labor of love" in some instances). There are also opportunity costs in terms of curricula

Table 2

Regression Estimates of Student Cognitive Achievement: 1975-76 WOWEE Sample
(Dependent variable = Posttest score; *N* = 1,833)

Variable	Regression Coefficient	Beta Coefficient	*t*-ratio
Pretest score	0.781	0.673	29.33**
Conex (c = 1, x = 0)	−2.917	−0.169	7.38**
Affect score	4.844	0.088	3.02**
Sex$_t$ (same = 1)	−0.476	−0.040	1.72
Sex$_s$ (M = 1, F = 0)	0.016	0.008	0.33
Sex$_f$ (M = 1, F = 0)	−0.027	−0.002	0.11
Grade level (5-12)	0.122	0.066	1.34
D_{01}	0.059	0.003	0.10
D_{04}	−0.101	−0.003	0.14
D_{40}	3.219	0.157	4.98**
D_{41}	1.221	0.062	2.37*
D_{50}	2.814	0.133	4.02**
D_{51}	−0.441	−0.009	0.61
D_{52}	−1.421	−0.051	1.68
D_{53}	0.129	0.007	0.89
D_{54}	4.321	0.077	2.19*
D_{60}	−0.398	−0.009	0.77
D_{61}	1.588	0.081	2.34*
Constant	6.134		39.58**

$\bar{R}^2 = 0.5961$ S.E.E. = 4.26 $F = 132.11$ (d.f. 1814 and 18)**

* significant at the 0.05 level.
** significant at the 0.01 level.

foregone as a result of the project activity. A rough estimate of total costs for the first year project discussed above is $75,000. For the second and subsequent years of project implementation, these costs decline rapidly as the fixed costs of development (incurred in the first year) spread out. But, even if we take the entire first-year cost as the basis, we find that the two-points-per-student gain on the cognitive posttest costs approximately $7.50 per student (based on a first-year student exposure of roughly 5,000 students). *Put another way, a twenty percent increase in the average level of economic literacy costs about $15.00 per student.* Moreover, this unit cost does not "correct" for gains in the affective domain or for increased cognitive achievement in other (noneconomics) disciplinary areas.[19]

Finally, this project suggests the potential for WOWEE implementation through diverse curriculum areas such as social studies and business education. In Illinois school districts the WOWEE curriculum has found a place in home economics, fifth-grade mathematics, English, history, vocational and distributive education, and counseling as well as in social studies and business/consumer education. Through the 1976-77 school year, over 14,000 students and nearly 500 teachers have been exposed to the WOWEE curriculum. In almost all cases, the initial implementation has "stuck" where it was infused. This has occurred because the project has met the needs of students and their teachers in very direct, low-cost, and useful ways. In 1977-78 the project will enter its fourth year of implementation in three entirely new areas of the state, with combined support from local community groups and renewed support from the National Science Foundation (NSF). In sum, WOWEE is a program about work that works!

Footnotes

[1] For previously published evaluations refer to Supporting Materials 12, 15 and 16, and to John C. Soper, "A Simultaneous-Equation Approach to Cognitive and Affective Learning in Economics," *Atlantic Economic Journal*, 5 (Spring 1977). Supporting materials are available with the complete report from the Vernon R. Alden Library, Ohio University, Athens, Ohio.

[2] See Supporting Materials 1-4 and 17 for some background specifications of the WOWEE project's content. Items 2-4 and 17 reveal the evolution of the project (in terms of content changes) as it moves into the fourth year of implementation (1977-78).

[3] Robert L. Darcy and Phillip E. Powell, *Manpower and Economic Education: A Personal and Social Approach to Career Education* (Denver: Love Publishing Co., 1973).

[4] See Supporting Materials 5 for a listing of "WOWEE School Districts" through 1976-77.

[5] See Supporting Materials 17 for a listing of the 1976-77 summer workshop schedule and the 1977-78 revised schedule.

[6] Beginning with the summer of 1976, a second intensive summer institute was held at Southern Illinois University at Edwardsville for groups of St. Louis-area teachers.

[7] See Supporting Materials 2, 3 and 4 for evolution of the course content.

[8] See Supporting Materials 3 in particular.

[9] See Supporting Materials 6 for a set of staff-developed "assignments" for Action Committee members.

[10] See Supporting Materials 7 for one company's "in-house" newsletter on Action Committee activities during the 1976-77 project.

[11] See Supporting Materials 8 for examples of teacher-created WOWEE materials.

[12] See Supporting Materials 9 for a copy of the WOWEE testing instruments used.

[13] For a description of the Texas project, refer to William A. Luker *et al.*, *Integrative Manpower - Economic Education: An Experiment in Curricular Change* (Denton, Texas: The Manpower and Industrial Relations Institute, North Texas State University, 1974).

[14] Refer to James G. Snider and Charles E. Osgood, Eds., *A Semantic Differential Technique: A Sourcebook* (Chicago: Aldine, 1969); C. E. Osgood, G. Suci, and P. Tannenbaum,

The Measurement of Meaning (Urbana: University of Illinois Press, 1957); and Supporting Materials 10 for both the general and project-specific background on affective evaluation.

[15] Again, see Supporting Materials 10 for details.

[16] An explanation of the procedures used to construct this "affective change" variable may be found in Supporting Materals 10.

[17] The sex interaction variable (Sex$_I$) takes on the value one whenever the sex of the student and the teacher are the same, and the value zero when the sexes differ. See Supporting Materials 11 for a discussion of the problem addressed through the use of this variable.

[18] The "human capital" reference is discussed in John C. Soper, "Needs for Evaluation in Economic Education." *Perspectives on Economic Education* (Joint Council on Economic Education, 1977). See Supporting Materials 12 for a draft copy. As is well-known, the cognitive pretest score actually measures two different dimensions of student human capital: prior knowledge of economics and individual intelligence. The former is a specific skill while the latter is a general ability. Consistent and reliable data on student general ability were unavailable to us in this project evaluation, given the large numbers of districts, schools, teachers and communities involved.

[19] Further evaluative evidence on the WOWEE project is contained in Supporting Materials 13 and 14. In particular, pp. 12*ff*. of item 14 contain a list and discussion of the "beneficiaries" of the WOWEE project in the first two years of its operation in Illinois.

How to Exploit the Economic Education Resource Market

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I. Introduction and Statement of Goals

The course we are about to describe grew out of a Needs Assessment made by our Center for Economic Education. It was found that the teachers wanted to incorporate economics into their curriculum, K-12. They were especially interested in current trends in economic education, both in material resources and in current teaching methods. The teachers represented all grade levels and many different subject areas including math, home economics, industrial arts, agriculture, language arts and social studies. Thus, economic backgrounds were as varied as their teaching situations. Many of them had never had an economics course, while a few had a fairly good economics background.

Our goal was to set up a course in economic education that would meet a variety of needs, but we were not expecting to put together a miracle course that in one quarter would meet all the needs. The biggest concern was to organize an introductory course that could be followed by at least one, or possibly two, more quarter classes with the same participants.

After much discussion and debate we felt the most important goals of this introductory course should be to acquaint the teachers with a multitude of materials and methods for teaching economics. This, we knew, the participants would most readily identify with because it would be directly related to their daily teaching experiences. It was evident from the outset that they were eager to put their hands on material and activities that they could use in their classrooms.

By using a *Methods and Materials* approach to this course we were able to attain some other goals. First it helped those without an extensive economics background to acquire an understanding of many basic economic concepts and generalizations. This was a prerequisite so that the teachers would feel confident enough to use economic content in their own classrooms. Another goal this format helped us to attain was to prove to teachers that setting up a course in economics is not a costly venture. It was our objective to provide them with access to a multitude of material resources at no cost or very little cost to their school districts. Along with this goal, probably the most important aim was to prove to the participants that economics is certainly not a dismal science. It can be taught at any educational level with a wide variety of interesting child-centered methods and materials.

The most difficult task for this class was the preparation. Our planning began 3 or 4 months prior to the first class meeting. What materials should be used? When should they be used? Are they available when we want them? Are the materials appropriate for both elementary and secondary teachers? Are the methods and materials innovative and educationally sound? Are we providing enough variety? Is there a balance between printed and nonprinted materials? Is there a balance between active and passive classroom activities?

With these questions in mind, we began putting materials together. This required that many letters be sent to get confirmation dates, especially on audiovisual materials. From our own library at the Center we filled four large boxes with printed materials, most of them being curriculum guides and classroom activity booklets. We had many of the materials (both audio visual and printed) from the Joint Council on Economic Education's *Checklist*. Those we didn't have were ordered and received by our first class meeting. Our Center also has a large collection of classroom simulations for teaching economics at all grade levels.

After making our inventory of the available materials, we previewed all for their economic content, grade level appropriateness, and to see where and how they would be introduced into our class. From this process we were able to set up our tentative class activity schedule.

II. Class Organization and Description of Steps and Procedures

The next series of questions that had to be answered dealt with how to organize the class meetings to meet the various needs of the participants. The participants were roughly divided into three groups of teachers—elementary, upper elementary-junior high, and senior high. We felt that during the first part of every class meeting we should conduct an activity that would be appropriate for all three groups together. This was usually a film, filmstrip or a classroom method for teaching economics. Following the activity we would discuss how the activity could be modified or adapted to make it appropriate for any specific grade level. Being together in one group at the beginning of every class also gave us an opportunity to make general announcements and to provide the students with a general introduction to that evening's activities. Each class meeting we would also divide the participants into the three groups previously mentioned for activities that were specifically geared to their grade level. This segment could be divided into two parts: (1) participation in the activity, and (2) discussion of how the activity could be used in their classrooms. To implement this we provided the participants with a resource guide form that they could use to make comments about the specific economic resource they were being exposed to. This form had a dual purpose. It served as a guide in evaluating economic education materials and it eventually became a resource guide for materials for future curriculum development and revision.

We ended each class meeting with an economics materials display. A separate room was set up each week prior to class with a large number of materials spread out on long tables. For 15 or 20 minutes teachers could browse through the materials and check them out for classroom use. In many instances we would give a short introduction prior to the materials display to focus attention on specific materials that might be useful in a particular teaching situation. Each teacher was required to check out at least one set of major economics materials, preview them, use them in his or her classroom, evaluate them and explain the results to his or her particular small group in our class.

This method proved beneficial in many ways. It helped to individualize the course by allowing teachers to select materials for their own particular classroom needs. Sharing these ideas in small groups with persons with common classroom concerns also proved to be motivational and it allowed us to examine more materials than could have been done individually.

We hoped that this method would also stimulate the participants to put together a unique and creative approach for teaching economics at their own particular grade level. With this in mind we highly recommended that they prepare and submit an entry to both the state and national awards programs.

III. Economic Methods Introduced

It is very difficult to separate methods from materials or materials from methods. Our goal was to introduce at least one method for teaching economics at every class session. What one has to keep in mind is that there is a spin-off and multiplier effect when dealing with methods. Depending on the grade level and sophistication of the students, any material resource can be utilized in a variety of ways. Each participant views materials and methods from his or her frame of reference and either adds to it, subtracts from it, or modifies it in some way. The reader should keep this in mind as we briefly describe some of the methods we introduced.

1. Using the *Circular Flow Model* in the classroom to teach economics. We discussed the economic concepts that this model helps to teach. Many of the later materials we were exposed to were related back to this model. We basically wanted them to view this model as a tool for understanding many economic issues. In their

various grade level groups they discussed how this method could best be introduced and utilized.

2. Using *Games and Simulations* to teach economics. We felt very strongly about this method because the field of economics has a wealth of materials that are introduced or can be introduced by this means. Some of the simulations we used were:
   A. Wheat Market Game
   B. The Big Apple
   C. The Economic Values Game
   D. Energy X
   E. The Economy Game
   F. Bronze Axes

   Many other simulations were made available to the participants to check out and preview and use in their classroom. The results of these were discussed in their small groups.
3. How to set up and use *Community Resources* to teach economics. We used the Joint Council on Economic Education to provide them with a model of how they could do this for their own local community.
4. How to learn economics from taking *Field Trips*. We again used the Joint Council's guide to show the participants the questioning technique. We discussed what economic concepts and generalizations could be introduced or reinforced by using this method.
5. *Testing Instruments* available in economics. We provided them with the appropriate tests of economic understanding and discussed what economic concepts and generalizations the instruments were trying to cover. We combined this with our state test on social studies assessment. The film "The National Economy Quiz" was used and well received by the participants.
6. We introduced the *College Bowl* method of reviewing economic concepts and generalizations previously taught. This method can be used to teach any content, but the important ingredients it adds to the classroom are excitement and group competition.
7. The *Budgeting Exercise* was introduced to teach the economic concept of scarcity, alternative costs, economic values, and decision-making. This method offers excitement, movement, and verbal interaction.
8. How to select and use *Audiovisual Materials* for teaching economics at various grade levels. A large proportion of our time during this course was used doing this. We had two goals during this phase. The first was to provide the participants with a source of audiovisual materials. We wanted to acquaint them with the wealth of materials available in this area to teach economics at all grade levels. Secondly, we wanted them to learn a strategy of "debriefing" audiovisual materials for their economic content. Inquiry questioning techniques were introduced throughout this segment. Possible follow-up methods were also continuously discussed.
9. Using the *Case Study* approach for teaching economics. For this method we used case studies from the DEEP project. We demonstrated how the concepts of scarcity and alternative costs could be taught by using this method. The case study "Fable" which is also a simulation was introduced. This helped to teach the economic questions of What to produce? How to produce it? and How should it be distributed? Various case studies were made available for the

participants to check out and try in their classrooms. One that deserves special attention is the case study available from McDonald's. This was especially good for the elementary teachers, and the cost is minimal.

10. Using the *Small Group Process* for teaching economics. This method was introduced as a means of allowing students themselves to play a major role in analyzing materials such as films, filmstrips, simulations, current events and case studies. In groups of four or five, students are provided with discussion questions (teacher-written) that allow them to examine the economic issues from the perspective of concepts previously learned. Models of how this can be done were provided, and the various small groups discussed how this method could be utilized in their particular teaching situations.
11. Using *Student Independent Projects* to teach economics. For this segment we used projects from the Joint Council's Annual Awards programs. The one project we went into detail on was "How Your Leisure Time Activity Affects the Economy of St. Cloud." This project served our purposes well because it shows how economics can be taught by going beyond the classroom and out into the community. It allows the student to be creative and a director of his own learning. Most importantly, it provides the teacher with an evaluation tool to see whether the economics taught in the classroom can be applied by the student in the real world.

These were only a sampling of the methods introduced during the quarter. Many variations and modifications of the above were discussed.

IV. Teaching Materials Used During the Course

Because of the volume of materials used during the quarter it is almost impossible to make individual comments about each material resource. Many of the materials listed were made available to individuals, some to small groups, and others were for the entire class.

A. Audiovisual Materials and Sources
  1. From the Ninth Federal Reserve Bank
    a. In Reserve
    b. Inflation
    c. Money and Banking and the Federal Reserve
    d. Money
    e. What consumers should know about truth-in-lending
  2. From the College of St. Thomas (St. Paul, Minn.)
    a. Buyers Beware
    b. Economic Topics Filmstrips
    c. Priorities, Decisions, Security
    d. Money Management
    e. Protecting the Consumer
    f. The Case for Competition
    g. Allocating our Resources: The Search for Stability
    h. Economics and the Individual: of Dollars and Sense
    i. Economics and the Individual: Which Comes First
  3. From Aetna Life Insurance Company—The National Economy Quiz

4. From Modern Talking Picture Service—The American Enterprise Series
    a. Land
    b. People
    c. Innovation
    d. Organization
    e. Government
5. From Proctor & Gamble
    a. Consumer Choice
    b. Is Anybody Listening?
6. From the Minnesota Bankers Association
    a. Banking: No Limit to Dimensions
    b. Paying by Check
    c. Your Town
    d. Banking in Action
    e. Bread
    f. Manage Your Money
7. From the Joint Council on Economic Education *Checklist:*
    a. The Economics of the Oceans
    b. The Economics of Crime
    c. The Economics of Pollution
    d. Economic Stabilization Policies
    e. The Economics of Taxation
    f. The World Economy
    g. Unemployment and Inflation
    h. Government and Our Economic System
    i. Economics in American History
8. How to Set Up or Participate in a Multischool District Economic Materials Consortium.

    For this activity we called a consultant, Dr. Craig Kissock from the University of Minnesota—Morris, who was responsible for the planning of the Economic Materials Consortium in Litchfield, Minnesota. He explained how school districts could share in the financial burden of purchasing economic materials and thus increase the benefits to each district while decreasing their costs by not duplicating purchases of the same economic materials. It was explained in detail how the consortium was set up and how teachers could utilize it for maximum benefit. At the end of the session teachers browsed through the materials available at the consortium. This session was highly beneficial.
9. Printed Materials Used during the Quarter

    Most of the printed materials made available to the students during the course were from The Joint Council on Economic Education *Checklist.**

V. Economic Concepts Introduced Using Various Methods and Materials

Scarcity
Resources
Wants
Needs

Shortage
Surplus
Supply
Demand

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* For a detailed list of materials see the complete report, which can be obtained from the Vernon R. Alden Library, Ohio University, Athens, Ohio.

- Goods
- Services
- Alternative costs
- Trade-offs
- Economic choice
- Production
- Consumption
- Saving
- Investment
- Distribution
- Trade
- Interdependence
- Markets
- Money
- Regulation
- Inflation
- Recession
- Banking
- Credit
- Expansion
- Contraction
- Growth
- Stability
- Labor
- Business
- Comparative advantage
- Diminishing returns
- Profit
- Economic values
- Division of labor
- Specialization
- Fiscal policy
- Monetary policy

VI. Evidence of the Learning Experiences by the Participants

Initially this type of course is difficult to evaluate objectively. It was taught during the Spring Quarter; thus, many of the resources teachers were introduced to would not have an effect until future dates. With this in mind, we administered a subjective course evaluation during our last class meeting. We are convinced from these teacher reactions that the course met its initial goals and probably even more.*

VII. Summary Statement

This course stimulated the participants to do a cost-benefit analysis on whether economics was worthy to be in their curriculum. The results were that the benefits far exceeded the costs. They were able to see the wealth of resources available at all grade levels to teach economics. It was proven that these resources are available at a minimal cost to their school districts. Above all they learned that economics is certainly not a dismal science. It can be taught in a variety of interesting, innovative and educationally sound ways at any grade level.

At the outset of this paper we mentioned that this course would serve as an introduction to other courses offered by our Center. Three more quarter classes will be provided to the same participants during the next school year. They are (1) Games and Simulations to Teach Economics, (2) Adventure Environment, (3) Contemporary Economic Issues.

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* The evaluations are included with the original report which is available from the Alden Library, Ohio University, Athens.

A Project Presented for the Chautauqua Short Course on Teaching Introductory Economics

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Purpose

The purpose of this project was to introduce an exercise which would help to clarify some difficult concepts in the teaching of introductory economic theory. In addition, there was the objective of relating the conceptual and theoretical components to a current public issue in order to enhance interest and demonstrate applicability.

The exercise was initially conducted in an undergraduate introductory economics course at a small private, two-year, liberal arts institute in the East. The class consisted of approximately 30-35 women. I have continued to utilize the exercise each year in an introductory economics course for graduate students in administration.

Teachers often make the *false* assumption that undergraduate students will only "groove on" clever examples utilizing beer, pizza or marijuana. Nevertheless, this exercise did utilize marijuana as the subject because I felt it had particular characteristics as a product (e.g., its illegality) which would be beneficial in explaining certain concepts. These will be discussed below.

Administering the Exercise

The Questionnaires: The first questionnaire (Demand Schedule "A") was distributed to each member of the class. The students were asked to take it home and fill it out after reading the directions carefully. The importance of completing the questionnaire individually was stressed. I then took between 15 and 30 minutes to clarify the directions and assumptions with the class.

The absolute confidentiality of the exercise was noted, though it is difficult to assess whether responses were at all distorted for fear of being exposed. My opinion would be that if there were any distortion it would involve *over-estimating* demand due to the peer opinion outweighing legal considerations. No one failed to turn in a questionnaire. They were asked to put some identifying number of their own choosing on the questionnaire so that any questions of clarification on my part could be conducted anonymously by referring to the number. They were specifically directed not to put any names on the questionnaires.

At the following class session the questionnaires (i.e., Demand Schedule "A") were collected and the follow-up questionnaire (Demand Schedule "B") was distributed. The single difference between the questionnaires was in the first assumption. The first questionnaire (A) assumed that the current

Demand Schedule A

Number ____________

Description:

This survey is being conducted in order to estimate the market demand for marijuana among various populations under various market conditions. The survey is strictly anonymous and we request that no names be written on the questionnaire.

Assumptions:

In recording your demand preferences in the demand schedule below, please consider the following assumptions:

1. Assume that the current laws regarding marijuana are in effect (i.e., it is illegal to buy, possess or sell)
2. Assume that it will only be sold in one-half ounce (½ oz.) units or multiples thereof. Thus, if you would normally buy 1¼ oz. you should choose between 1 and 1½ oz.
3. Assume the prices given below will be in effect for the coming month and record your preferences as they would be any time during the coming month, not necessarily on this particular day.
4. Assume you would not be receiving any marijuana as a gift and that you could not receive it for free from any source during the month.

Special Questions:

Please answer the following supplementary questions by circling the correct answer:

1. Were you ever a "user" of marijuana? YES NO
2. Were you ever a "buyer" of marijuana? YES NO
3. Do you consider your disposable income to be: VERY LIMITED? SOMEWHAT LIMITED? FAIRLY UNLIMITED?
4. Do the quantities you have listed below reflect amounts (all or in part) which you intend to resell (i.e., above your personal needs)? YES NO
5. How old are you?

Demand Schedule: (A)

Please record below the quantity of marijuana (in ounces to the nearest half ounce) which you would be *both able and willing to purchase* at the stated prices, given the assumptions stated above.

PRICE (per oz.)	$5.00	$10.00	$15.00	$20.00	$25.00	$30.00
QUANTITY (nearest ½ oz.)						

Comments:

Please make any personal comments and/or explanations you wish to:

Demand Schedule B

Number ____________

Description:

This survey is being conducted in order to estimate the market demand for marijuana among various populations under various market conditions. The survey is strictly anonymous and we request that no names be written on the questionnaire.

Assumptions:

In recording your demand preferences in the demand schedule below, please consider the following assumptions:

1. Assume that marijuana has just been made legal in all respects (i.e., you can buy, possess or sell it).
2. Assume that it will only be sold in one-half ounce (½ oz.) units or multiples thereof. Thus, if you would normally buy 1¼ oz. you should choose between 1 and 1½ oz.
3. Assume the prices given below will be in effect for the coming month and record your preferences as they would be any time during the coming month, not necessarily on this particular day.
4. Assume you would not be receiving any marijuana as a gift and that you could not receive it for free from any source during the month.

Special Questions:

Please answer the following supplementary questions by circling the correct answer:

1. Were you ever a "user" of marijuana? YES NO
2. Were you ever a "buyer" of marijuana? YES NO
3. Do you consider your disposable income to be: VERY LIMITED? SOMEWHAT LIMITED? FAIRLY UNLIMITED?
4. Do the quantities you have listed below reflect amounts (all or in part) which you intend to resell (i.e., above your personal needs)? YES NO
5. How old are you?

Demand Schedule: (B)

Please record below the quantity of marijuana (in ounces to the nearest half ounce) which you would be *both able and willing to purchase* at the stated prices, given the assumptions stated above.

PRICE (per oz.)	$5.00	$10.00	$15.00	$20.00	$25.00	$30.00
QUANTITY (nearest ½ oz.)						

Comments:

Please make any personal comments and/or explanations you wish to:

___

___

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laws regarding marijuana were in effect (i.e., that it was illegal to buy, possess or sell marijuana). On the second questionnaire (B) it was assumed that marijuana had just been made legal in all respects.

Again, the students were asked to take the questionnaire home and to record their demands for marijuana, considering the assumption of its being legalized. Students were cautioned to jot down the identifying number which they had used on the first questionnaire so they could use the same number on the second questionnaire, and the two could therefore be matched.

The results of the two questionnaires were then recorded on a summary sheet and it was photocopied. The results were distributed to each student at the third class period. (*Note:* This entire process could be collapsed into a single class period, though you lose the advantage of carefully considered responses and increase the fear of violations of confidentiality.)

The Assumptions: The first assumption regards the legality of the product. It is the only one which changes and it was discussed above. The *second* assumption simply limits the expression of demand to not less than ½ oz. of "grass." It is unnecessary to explain how much that is for the first questionnaire; if they don't know, they aren't buying. It may be necessary to clarify this for previous nonusers on the second questionnaire. While this assumption may exclude some people who would buy considerably less than ½ oz. (e.g., a "joint"), it should not affect the results substantially—"joints" would normally be received as gifts rather than being purchased.

The *third* assumption is perhaps the next most important (after the first). It simply states that the demand period is to be a month. This should preclude someone distorting the results by saying, "I just bought some yesterday, so I wouldn't buy any today." It is also quite realistic; a seller of a product is usually not concerned with the sales on any particular day, but rather over the near future.

The *fourth* assumption is less realistic. It assumes no marijuana will be received as a gift. However, we are concerned with estimating demand from a particular group. This assumption simply incorporates the external demand which would in fact service the group under study.

Special Questions: The first two special questions help to separate the reasons for a person's demand. It helps in analyzing how many "nonusers" become "users" after legalization, and similarly how many "nonbuyers" become "buyers." Likewise, some previous "users only" become "buyers" after legalization. Strangely, there are even some who are "buyers," *not* "users." These questions help to clarify the underlying reasons for changes in the market demand, and to emphasize that the market demand is a composite of many individual decisions which often reflect quite different underlying motives.

The third question asks respondents to estimate their disposable income within three rather broad (and subjective) groups. This helps in analyzing the importance of income to demand and the relative demand elasticity between various income groups.

The final question asks for the age of the respondent. It was included in order to analyze the demand within age groups if the questionnaire was to be extended to nonstudent groups. It is probably irrelevant to a homogeneous student group, although other demographic information (e.g., sex) may be useful.

Value of Exercise

The primary value of this exercise is that it helps the instructor to explain rather complex economic concepts in a comprehensible and interesting way. I have found it most useful in explaining such concepts as market demand, elasticity, and substitute and complementary products.

First, it is often difficult to explain that "market demand" is an aggregate or net result. Some people don't buy the product, and those who do, buy different amounts at different prices. Likewise, when changes take place (other than price) individual buyers respond in different ways for different reasons. In this example, I found that large buyers of marijuana (i.e., those apparently intending to resell it) actually decreased their demand for the product when it was legalized because they no longer felt they could make the kind of profits they previously had made. However, for other students the demand in most cases increased as the product was legalized because some previous "nonusers" became "users" and previous "users" often were not afraid to buy and hold larger quantities (advantages of scale?).

The interaction of these various factors is often more clear to the student as he or she helps to construct the market demand curve from the individual estimates. It is an excellent example for demonstrating how nonprice factors (e.g., legalization) can alter the entire demand curve, thus more clearly drawing the distinction between "demand" and "quantity demanded." Likewise, the concept of demand being represented by a downward-sloping curve is usually more readily apparent to the student.

Second, the concept of elasticity is traditionally a difficult one to explain. This exercise eases the task. The instructor should first discuss those factors which help to determine demand elasticity (e.g., available substitutes, necessity and relative expensiveness). Then the computation of demand elasticity should be demonstrated. The student can more easily see that the elasticity of demand (i.e., response to price changes) may be different for different individuals. For example, some may see marijuana as more of a necessity than do others, and some may feel there are acceptable alternative products whereas others will not.

However, the student can be shown that it is, once again, the composite elasticity which is of general interest to the economist and seller. Similarly, the exercise helps to demonstrate that elasticity changes over the length of the demand curve—that it is a measure of change between two points. Furthermore, the legalization assumption can be utilized to show how external changes can alter the demand elasticity for a product.

Finally, it is an easy leap from here to discussing substitute and complementary products. The legalization of marijuana will most likely increase the demand for related products such as papers, pipes, clips, bongs, etc. Undoubtedly, you will think of additional concepts which can be more clearly explained through this example.

Result of the Exercise

I have presented below the results of the exercise when presented to an introductory class of freshman and sophomore women. For a small class the results can be hand-tabulated and clearly summarized in a table.

The aggregate results were as follows for the 32 students who participated:

Point	A	B	C	D	E	F	Comments
Price (oz.)	$30	$25	$20	$15	$10	$5	
Quantity 1	5.0	8.0	18.5	28.5	64.5	109.0	illegal (in ounces)
Quantity 2	5.0	7.5	20.0	30.5	67.0	111.0	legal (in ounces)

The going market price at the time the exercise was conducted was somewhere between $15-20 per ounce. Therefore, the demand estimated by this particular class represented between $370 and $428 per month (if illegal) and between $400 and $458 per month (if legal). The upward shift in demand after legalization was not as great as expected because (as mentioned above) some large buyers actually decreased their demand. Using the formula,

$$e_d = \frac{\dfrac{Q_2 - Q_1}{(Q_1 + Q_2)/2}}{\dfrac{P_2 - P_1}{(P_1 + P_2)/2}}$$

four different coefficients of demand elasticity were calculated. The results are presented below:

Demand elasticity between Points A & D when illegal = 2.10
" " " " " " " " legal = 2.15
" " " " D & F " illegal = 1.17
" " " " " " " " legal = 1.14

The results are consistent with logical expectations. The demand is "relatively" elastic in all cases. This might indicate that on the whole this product is seen more as a luxury than as a necessity. Of course it might also indicate the presence of acceptable alternative products. In the high price range between $15 and $30 per ounce (Points A and D) the elasticity of demand was nearly twice as high as in the low price range between $5 and $15 per ounce (Points D and F). This again supports the theory that the greater the proportion of one's budget which the price of the good represents, the greater will be the response to price changes. The effect of the relative price was much greater than the effects of legalization. One would expect that legalization would provide more alternative sources and therefore would increase the elasticity of demand. In fact it changed very little, increasing slightly in the high price range (as expected) but decreasing slightly in the low range.

Legalization did shift the demand curve slightly to the right as would be expected. Before legalization 18 of the 32 students (56 percent) were "buyers." After legalization all 18 remained buyers, with:

15 (83 percent) buying the same amount
1 (6 percent) buying more than before
2 (11 percent) buying less than before

Before legalization 14 of the 32 students (44 percent) were "nonbuyers." After legalization,

10 (71 percent) remained nonbuyers
4 (29 percent) became buyers

Before legalization there were 20 of the 32 students (62 percent) who were "users" of marijuana. After legalization all previous users remained users, with:

14 (70 percent) demanding the same amount
4 (20 percent) demanding more than before
2 (10 percent) demanding less than before

Before legalization there were 12 of the 32 students (38 percent) who were "nonusers." After legalization there were,

9 (75 percent) who remained nonusers
3 (25 percent) who became users

Apparently it was not the illegality that was the primary determinant of their not using "grass."

Finally, it was interesting to note the effect of disposable income on demand. Again the theory was supported with logical results. Each student was asked to describe her disposable income in terms of three broad and subjective categories, (1) very limited, (2) somewhat limited, and (3) fairly unlimited.

The average demand (at the price of $15 per ounce) was calculated for each of these groups both before and after legalization. The results were as follows:

		Average Ounces Demanded at $15 per oz.	
	Number	Before legal.	After legal.
Very limited	10 (31%)	.10/mo.	.25/mo.
Somewhat limited	19 (59%)	.92/mo.	1.00/mo.
Fairly unlimited	3 (10%)	3.33/mo.	3.00/mo.

Again those with "fairly unlimited" incomes tended to be the larger buyers (buying for resale) and their average demand dropped off after legalization. For the other groups demand went up, but there was a high positive correlation between quantity demanded and disposable income (perceived).

Student Assignments

Here are a couple of alternatives. You can summarize the results for the class in a table and distribute it to the students. Or each student can administer the exercise to a group of his or her own choosing. Regardless of which alternative is selected, the student can be asked to determine the following:

1. The demand curve (a separate plot for before and after legalization).
2. The elasticity of demand
   a. before legalization
      1. between Points A and D
      2. between Points D and F
   b. after legalization
      1. between Points A and D
      2. between Points D and F
3. The effect of disposable income on consumption
4. What percent of nonusers became users after legalization.
5. What percent of nonbuyers became buyers after legalization.
6. What percent of nonbuyers and nonusers became both after legalization.
7. Whether large buyers behaved differently from other buyers after

legalization.
8. What difference age appeared to make in terms of consumption before and after legalization.

Evaluation of the Project

The evaluation of the project has been informal and somewhat subjective. Because it deals primarily with a limited number of concepts it did not seem appropriate to utilize gain scores on something like the TUCE which is a more comprehensive evaluation instrument. However, I am totally convinced of the value of the exercise in helping me to achieve the objectives I mentioned above. I base this on offhanded comments by students (e.g., one girl said, "It just seemed like a bunch of jargon before the marijuana exercise; after that it all made some sense"). I was also aware that students did better on the exams concerning questions dealing with elasticity. Since this concept had traditionally been their "Waterloo" the change was both noticeable and welcome.

A Model for Teaching Curriculum Development in Economics

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Introduction

Nathaniel Hawthorne said, "Life is made up of marble and mud." In that scheme of things, curriculum development has to be mud! One never whispers, "Let's talk about curriculum development" at a party, and it is not the stuff of TV specials. On the other hand, someone said about the city of Paris, "Ah, Paris! To have been mud and to have become spirit." The teacher's job is to develop curriculum into mud magnificent—to breathe life into the mud he or she works with every day.

The unit described in this report is for a three-to-six-hour session for teachers attending summer workshops or taking in-service training in economics. It is a model for teaching teachers a sequential development of economic concepts, in accordance with the learning theories of Jean Piaget. This unit was presented by the author at six economics workshops for teachers in June of 1977. It was scheduled for the fifth, sixth or seventh day of the workshops and was limited to a three-hour session. The goals were as follows.

	Objectives	Activities
I.	To review Piaget's learning theory.	Teachers will plan a learning cycle of an economic concept.
II.	To review teaching techniques.	Teachers will critique objectives and formats and will experience methodologies.
III.	To tie learning theory directly to decision-making.	Teachers will participate in a learning cycle on decision-making.
IV.	To "wrap up" the unit.	Teachers will prepare and present summary statements on the salient parts of the unit.
V.	To evaluate their teaching and the effectiveness of the unit.	Teachers will use checklists to evaluate their teaching and the author's presentation of the unit.

A packet of handouts was distributed to each participant. The author discussed the outline and the goal of each part of the outline.

Handout No. 1

A Model for Teaching Curriculum Development in Economics

I. Learning Theory
   A. Concepts
   B. Jean Piaget's Developmental Stages
      1. Sensory (prelanguage)
      2. Concrete—operational (experiential)
      3. Formal—operational (abstract)
   C. Learning cycles
      1. Exploration (discovery of variations)
      2. Invention (classification, reordering of data)
      3. Application (model-building)
II. Teaching techniques
   A. Objectives
   B. Formats
   C. Methodologies
III. Decision-Making (heart of economics)
   A. Tools economists use
      1. Statistics (exploration) 2. Logical thinking (invention)
      3. Models (application)
   B. Learning Cycles
      1. Consumer spending 2. Scarcity
IV. Wrap-up
V. Evaluation
   A. "Check Your Inquiry-teaching Technique"
   B. Unit

Learning Theory

The motivational strategy was to have the teachers "brainstorm" the adjectives they would use to describe economics. Although about half the teachers had had no economics instruction except what they were receiving in the workshop, they came up with interesting lists. For example, one workshop group described economics as: interesting, challenging, complex, dismal, subjective, speculative, realistic, abstract, unsettling, objective, statistical, and symbolic. After discussing the lists all groups agreed that economics is abstract and that to understand economics and to be able to teach it one must learn concepts.

A concept was defined as a mental organization. A transparency was shown at this point, which stated: "Concepts help to simplify, to reduce confusion, to make sense out of the multitude of matters in everyone's environment." The author then tested the teacher's ability to learn concepts with the following exercise on pages 115-116.

As a test of the learning of this new concept, two measures of competency were provided—concept discrimination and rule of definition verbalization.

1. *Concept of Discrimination.* Both items 2 and 4 in Figure 6 are examples of the concept "blarp."
2. *Rule Verbalization.* A "blarp" may be defined as a triangle, rectangle, and circle placed in that order. Stated differently, there are three figures, one of which is a triangle, one a rectangle, and one a circle, always arranged with the rectangle in the center, the triangle to the left of the rectangle and the circle to the right.

The rule shows that the number, shapes and locations of the figures are critical attributes, while color and size are not. (See Gagné's Model for Concrete Concept Learning.)

Developmental Strategies

This phase began with a discussion of what the teacher is trying to do in the classroom. The discussion was based upon the following statements included in a transparency:

1. To replace, wherever possible, patterns of passive receptivity with patterns of physical and social as well as intellectual activity.

Gagné's Model for Concrete Concept Learning

1. Insure that the student repeats the concept name to acquire a stimulus-response connection.
2. Have the student identify several varied exemplars of the concept and specify its name.
3. Present several exemplars of the concept and several varied non-exemplars of the concept. (Having the students identify the discriminations by name is optional.)
4. Present additional exemplars of the concept all at once, and request students to specify the concept name.
5. Present the student with a situation containing a *new* instance of the concept, and ask him or her to identify the concept.

LEARNING A CONCEPT OF BLARP

You are about to encounter a concept that you have never learned before; its name is "blarp." Please pay close attention, because at the end of my instruction, you will be given a test.

Look closely at Fig. 1; it is a blarp.

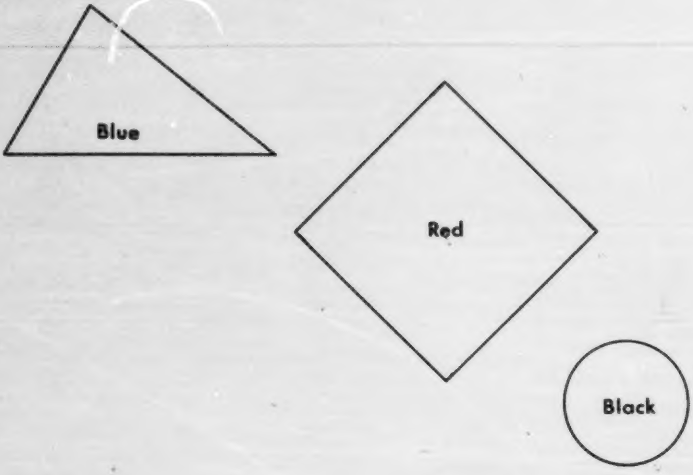
Blue
Red
Black

Figure 2 is also a blarp.

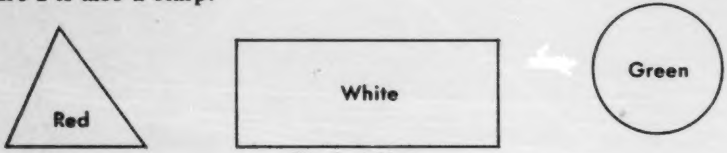
Red
White
Green

Fig. 2. A blarp.

But Fig. 3 is *not* a blarp. And Fig. 4 is *not* a blarp.

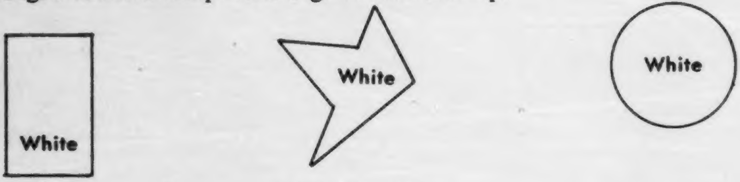
White
White
White

Fig. 3. A nonblarp.

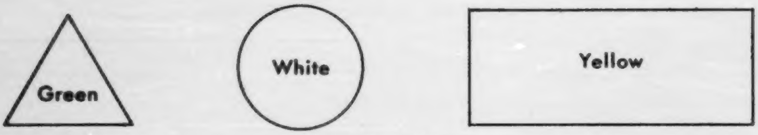
Green
White
Yellow

Fig. 4. A nonblarp.

Figure 5, however, *is* a blarp. Compare Fig. 5 with Fig. 4, which is *not* a blarp.

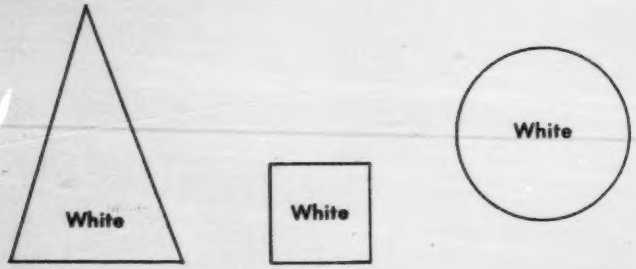
White
White
White

Fig. 5. A blarp.

Are you ready for a test? If not, reexamine the exemplars in Figs. 1–5. For your first test, you are asked to examine the four illustrations in Fig. 6 and to identify any instances of blarp.

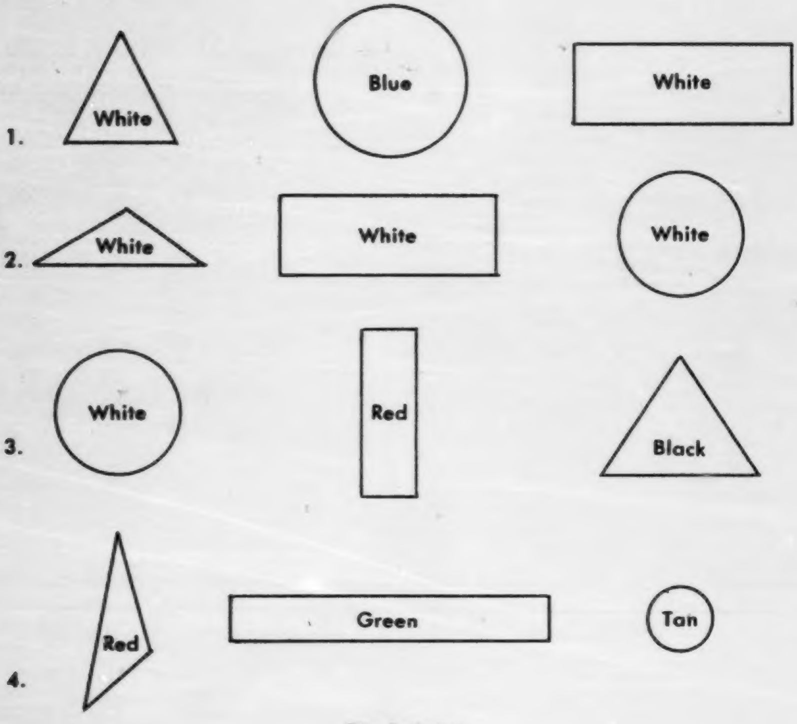
1.
White
Blue
White
2.
White
White
White
3.
White
Red
Black
4.
Red
Green
Tan

Fig. 6. A test.

2. To exploit peer-stimuli to learning available when students work together for several hours each day.
3. To foster student initiative in problem-stating and solving by the use of "learning cycles."
4. To adjust student tasks to their present levels of intellectual development while offering appropriate challenges to grow to higher levels.

Then Piaget's developmental stages of learning were discussed. During discussions of the *sensory-motor stage* we would blindfold a participant and ask him or her to identify various objects by touching them. The *concrete-operational stage* was illustrated by classification exercises in which a teacher would be asked to use classification in answering questions such as "Would you like to be . . . ?" The *formal-operational stage* was dealt with by having the teachers demonstrate economic concepts. Participants were asked to form groups of five and present economic concepts through charades to bridge concrete experiences to abstract thinking. This activity often resulted in very creative ideas. For example, one group had three teachers position their bodies so as to form a demand curve.

Karplus divided instructional units into what he called exploration, invention, and application stages. They work as follows:

A *Exploration:* Following a statement of the problem, students learn through activities which are supplied or suggested by the instructor.
B *Invention:* Concrete experiences from the exploration stage are used for generalizing concepts.
C *Application:* Students apply concepts learned during the invention activity. Application produces models for future action.

For example, in a "learning cycle" on consumer spending the *exploration stage* included use of a handout, "The Family-Money Questionnaire." The questionnaire included such questions as: "Do you think you have a better money sense than your spouse?" "If your family had to cut down sharply, where would you first cut expenditures?" "What is the most foolish thing you ever did with money?" With over 20 questions of this type, the questionnaire helped to show the variations in human behavior related to consumer spending. The *invention stage* consisted of an informal discussion of needs and wants. For the *application stage* we used a handout prepared by the Council for Family Financial Education. It was made up of such questions as: "Do you really need this item?" "Is the price reasonable?" "Are you sure that no other item can be substituted?" The consumer should not buy the product unless he or she answered "yes" to at least nine of the 11 items. The same approach was used with a "learning cycle" on the concept "scarcity." One activity (during the *invention stage)* was to have the participants list the knowledge, skills and attitudes needed by all people in order to cope with scarcity.

Several transparencies were prepared to focus the discussions of teaching techniques. One listed eight criteria for stating objectives—measurable behavior is identified, objective directly relates to overall goal, objective is appropriate to student levels, objective allows flexibility of instructional procedures and materials, and the like. Another transparency presented a schematic diagram of the "learning cycle" model, showing how one starts with learning objectives and goes down through exploration, invention, and application activities. There was a transparency showing the steps in economic decision-making, and one listing 19 ways to economize by saving time.

Wrap-up and Evaluation

The participants were divided into subgroups of from two to four people for purposes of the "wrap-up." Each group wrote a summary statement of the unit activities pertaining to a section of the unit outline assigned to that group. Everyone received a handout entitled "Check Your Inquiry-Teaching Technique," developed by Mary Sugrue and Jo Ann Sweeney. (See "Today's Education" in the *NEA Journal*, May 1969, pp. 43-44.) The Sugrue-Sweeney instrument asks the teacher how often he or she does certain things that an "inquiry teacher" would most likely do. The teacher checks "Regularly," "Frequently," "Sometimes," or "Seldom" after such statements as: "I make available a wide variety of resources and material for student use."

Finally, the teachers were asked to evaluate the unit. They were to check 1, 2, 3, 4 or 5 (1 meant "not good at all," and 5 meant "very good") after such items as "Useful in the classroom," "Activities," and "Handouts." They were also asked to tell what part of the sessions they enjoyed most and what part they enjoyed least. They were free to add any additional comments they chose. Over 100 teachers submitted evaluations, and most checked 4 or 5 for the various components of the session. No one rated any component 1 ("not good at all"), suggesting that every part of the session was seen as having at least some value to the participants. The activities proved to be the most popular part of the session, and the major complaint was that there was too little time. Nearly all the teachers felt that their students will learn more economics as a result of their own exposure to this unit.

In summary, the unit is based upon two assumptions: (1) Intellectual development progresses from a sensory-motor stage through a concrete-operational stage to a formal-operational stage, and (2) learning is always active—never passive. Economic concepts are mental organizations which help students to organize experiences, screen new experiences, modify and reorganize data, determine behavior, and act as analytic tools. The study of economics is as much to promote reasoning as to learn content. If one accepts these ideas it is imperative that teachers be taught how to develop economics curricula through the use of active learning cycles involving statistics, logical thinking, and models. Exploration is concerned with gathering data pertinent to stated problems. Invention includes concrete experiences so that when a problem introduces a degree of disequilibrium into a student's life he or she can regain temporary equilibrium through a process of self-regulation. The application stage applies concepts. It is through teaching teachers how to match appropriate learning cycles with students' stages of intellectual development that economics can be learned through systematically developed curricula.

Note: Because of limitations of space and the unusual nature of this report, we can present only an abbreviated and modified version in this booklet. The original can be obtained from the Vernon R. Alden Library, Ohio University, Athens, Ohio.—*The Editor*